

# ***IDA***

INSTITUTE FOR DEFENSE ANALYSES

## **Nuclear Stockpile Certification and Stewardship as Addressed in the Senate's October 1999 CTBT Deliberations**

Rob Mahoney

March 2000

Approved for public release;  
distribution unlimited.

IDA Document D-2426

Log: H 00-000612

20000626 072

DTIC QUALITY INSPECTED 4

**This work was conducted under contract DASW01 98 C 0067, Task AI-6-1742, for the Office of the Director, Defense Research and Engineering. The publication of this IDA document does not indicate endorsement by the Department of Defense, nor should the contents be construed as reflecting the official position of that Agency.**

**© 2000 Institute for Defense Analyses, 1801 N. Beauregard Street, Alexandria, Virginia 22311-1772 • (703) 845-2000.**

**This material may be reproduced by or for the U.S. Government pursuant to the copyright license under the clause at DFARS 252.227-7013 (NOV 95).**

INSTITUTE FOR DEFENSE ANALYSES

IDA Document D-2426

**Nuclear Stockpile Certification and  
Stewardship as Addressed in the  
Senate's October 1999 CTBT Deliberations**

Rob Mahoney

## **PREFACE**

This document reports work performed by the Institute for Defense Analyses in support of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile. IDA's support is being provided under the task entitled "Nuclear Stockpile Study Panel," which is sponsored by the Director, Defense Research and Engineering.

The author thanks the reviewers, Dr. David Graham and Dr. Brad Roberts, and the editor, Ms. Shelley Smith.



## CONTENTS

Preface.....	iii
Summary .....	S-1
1. Introduction.....	1-1
2. Development and Consideration of the CTBT and Other Test Limitations .....	2-1
Synopsis .....	2-1
Previous Treaties.....	2-2
Developments Prior to the Senate's Consideration of the CTBT .....	2-3
Senate Decision.....	2-4
Developments Subsequent to the Senate's October 13 Vote .....	2-4
Administration Position and Actions .....	2-4
U.S. Obligations .....	2-7
Proposed Commission on a Nuclear Testing Treaty .....	2-8
Proposed DoD and Senate Committee Reviews .....	2-11
3. Certification .....	3-1
Synopsis .....	3-1
Annual Certification Process .....	3-1
Views of Treaty Proponents.....	3-3
Views of Treaty Opponents .....	3-5
4. Stockpile Stewardship Program .....	4-1
Synopsis .....	4-1
Testing and Uncertainty .....	4-5
Synopsis.....	4-5
Views of Treaty Proponents .....	4-5
Views of Treaty Opponents.....	4-6
Capabilities for Refurbishment and Modernization.....	4-7
Synopsis.....	4-7
Views of Treaty Proponents .....	4-7
Views of Treaty Opponents.....	4-9

Effectiveness of SSP .....	4-10
Synopsis.....	4-10
Views of Treaty Proponents .....	4-11
Views of Treaty Opponents.....	4-12
Limited Scientific Understanding and Historical Experience.....	4-12
SSP as Work-in-Progress.....	4-14
Limitations of SSP .....	4-16
Support for SSP by Treaty Opponents .....	4-16
Options for Withdrawing from the Treaty (Safeguard F) .....	4-17
Synopsis.....	4-17
Views of Treaty Proponents .....	4-18
The CTBT as Negotiated .....	4-18
Daschle Executive Amendment No 2291, Section 6 .....	4-19
Views of Treaty Opponents.....	4-21
Limits of Safeguard F Commitment .....	4-21
Political Difficulty of Withdrawing from the Treaty .....	4-23
Dialogue Between Senators Warner and Specter Concerning the International Impact of Withdrawing from the Treaty .....	4-24
Limited Practical Value of Safeguard F.....	4-26
National Ignition Facility .....	4-27
SSP Funding.....	4-28
Synopsis.....	4-28
Views of Treaty Proponents .....	4-28
Views of Treaty Opponents.....	4-31

## APPENDIXES

A. CTBT Committee Hearings.....	A-1
B. Events Prior to the Senate's October 13, 1999 Vote on the Comprehensive Test Ban Treaty.....	B-1
C. Senate 1812 .....	C-1
D. Senator Warner's Statement on the CTBT Commission.....	D-1
E. Remarks by Senator Warner Concurrent with Introduction of S.1812.....	E-1

F. Glossary .....	F-1
G. Bibliography .....	G-1

## ILLUSTRATIONS

Table 2-1. Rollcall Vote No. 32 Ex, Comprehensive Test Ban Treaty, October 13, 1999 .....	2-5
Figure 3-1. 1998 Nuclear Stockpile Certification Memorandum .....	3-2
Table 4-1. CTBT Safeguards .....	4-2

## **SUMMARY**

The Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile (Panel) was established by Congress through the National Defense Authorization Act of 1999. The panel's tasks are to annually review and assess—

1. The annual certification process, including the conclusions and recommendations resulting from the process, for the safety, security, and reliability of the nuclear weapons stockpile of the United States, as carried out by the directors of the national weapon laboratories
2. The long-term adequacy of the process of certifying the safety, security, and reliability of the nuclear weapons stockpile of the United States
3. The adequacy of the criteria established by the Secretary of Energy pursuant to section 3158 for achieving the purposes for which those criteria are established

This report, prepared as part of the support that the Institute for Defense Analyses is providing to the Panel, summarizes points involving the stockpile certification and stewardship issues addressed during the Senate's October 1999 deliberations concerning the Comprehensive Test Ban Treaty (CTBT). It also presents an overview of developments subsequent to the Senate's October 1999 vote that involve the CTBT and other potential limitations on nuclear testing.

### **DEVELOPMENT AND CONSIDERATION OF THE CTBT AND OTHER TEST LIMITATIONS**

Important prior treaties are the Limited Test Ban Treaty, which prohibits nuclear testing in the atmosphere, in outer space, and under water, and the Threshold Test Ban Treaty, which places a cap of 150 kilotons on underground nuclear detonations. The Treaty for the Non-Proliferation of Nuclear Weapons was extended indefinitely in 1995; concurrent with extension, a document was agreed that included the goal of concluding a comprehensive test ban.

Negotiations for a CTBT date back to the 1950s. The CTBT reviewed by the Senate was negotiated between 1994 and 1996. President Clinton signed the treaty and sent it to the Senate for advice and consent in September 1997.

“Comprehensive” is a term of art that has had multiple meanings. During the most recent CTBT negotiations, the United States’ position changed to favor a zero-yield CTBT, consistent with the Administration’s interpretation of the treaty reviewed by the Senate.

By unanimous consent, the CTBT was brought to the floor of the Senate for debate and vote in October 1999. On October 13, the Senate did not ratify the treaty (which needed a two-thirds majority). The vote was 48 yeas, 51 nays, and 1 answered “present.”

Subsequent to the Senate’s vote, the Administration has announced that it will not resume testing and will otherwise act in accordance with the CTBT. The Administration has announced that it intends to work with Senators to address issues involving the treaty with the objective of obtaining Senate ratification in the future. The Administration has also conducted a review of the Stockpile Stewardship Program (SSP) and has an ongoing review of the National Ignition Facility, a key component within the SSP.

Disagreement exists concerning U.S. obligations, given the Senate’s decision not to ratify the treaty. Proponents argue that the United States, in accordance with Article 18 of Vienna Convention on the Law of Treaties, still has the obligations of a signatory. Treaty opponents argue that the vote released the United States from any Article 18 obligations. As is customary, the CTBT continues on the Executive Calendar of the Senate.

Senate 1812 is a resolution to establish a Commission on a Nuclear Testing Treaty. It was introduced by Senator John Warner and co-sponsored by Senators Susan Collins, Charles Hagel, Daniel Patrick Moynihan, Olympia Snowe, Gordon Smith, and Joseph Liberman. The stated objective is to “build bridges and find common ground on the issue of a possible treaty covering nuclear testing.” In introducing this resolution, Senator Warner suggested that some of the work being accomplished by the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile could be incorporated into the work of this commission.

Senate Majority Leader Trent Lott has proposed that (1) the Secretary of Defense initiate a review to identify ways in which the Administration and Congress could act together to strengthen the nuclear deterrent, and (2) the Senate undertake a major survey of the proliferation of weapons of mass destruction and associated means of delivery. The Administration does not appear to have made a public response to these proposals.

## **CERTIFICATION**

Since the mid-1990s, the Secretary of Defense and Secretary of Energy have been required to provide the President with an annual certification concerning the safety and reliability of the U.S. nuclear stockpile. To date, all of these reports have been positive, with no requirements identified for nuclear testing. Senate proponents of the CTBT gave emphasis to these recent annual certifications as the basis for having confidence in both current and longer-term capabilities for sustaining nuclear weapons without testing.

None of the Senators who opposed the treaty argued that there was an immediate need to resume testing. While not disputing that recent annual certifications have not identified any significant issues, opponents of the CTBT emphasized the limits of what is being accomplished in annual weapons certification or can be accomplished in the future. They argue that the absence of known problems does not mean that there are no issues—some problems may not have been encountered previously.

## **STOCKPILE STEWARDSHIP PROGRAM**

The Stockpile Stewardship Program (SSP) is the centerpiece of the Department of Energy's programmatic initiative to sustain confidence in the nuclear stockpile without underground testing. It includes:

- Operations associated with manufacturing, maintaining, refurbishing, surveilling, and dismantling the nuclear weapons stockpile
- The activities associated with the research, design, development, simulation, modeling, and nonnuclear testing of nuclear weapons
- The planning, assessment and certification of nuclear safety

In his September 22, 1997, *Letter of Transmittal* to the Senate, President Clinton presented a set of safeguards defining the conditions under which the United States could enter into a CTBT. Safeguards A through C, which involve research programs and test readiness, relate to the SSP. The SSP was a primary focus during Senate CTBT

deliberations. Treaty proponents and opponents differed with respect to (1) testing and uncertainty, (2) capabilities for refurbishment and modernization, (3) the effectiveness of SSP, and (4) options for withdrawing from the treaty (Safeguard F). CTBT opponents raised issues concerning the National Ignition Facility, and both opponents and proponents expressed concerns about long-term SSP funding.

### **Testing and Uncertainty**

The key issue was, How much uncertainty concerning the nuclear stockpile is acceptable? Some Senate proponents of the CTBT agreed with opponents that nuclear testing is, from a technical standpoint, the best means available for validating stockpile performance. While granting this point, CTBT proponents were prepared to accede to a zero-yield test ban because they believed that the alternatives to continued testing, particularly SSP, would provide sufficient confidence. Moreover, they contended that the zero-yield ban contributed to important policy objectives. Treaty opponents, on the other hand, argued that the level of uncertainty that would result from cessation of nuclear testing was unacceptable.

### **Capabilities for Refurbishment and Modernization**

Treaty proponents cited expert testimony and recent development of the B61-11 earth penetrating nuclear weapon as demonstrations that the ability to modernize the stockpile would be retained, given accession to the CTBT. Senators opposed to the CTBT emphasized the difficulty of refurbishment, stressing such points as the need to develop replacement plutonium pits that cannot be tested, changes in materials and fabrication processes, and shortfalls in understanding.

### **Effectiveness of the SSP**

CTBT proponents argued that the SSP's effectiveness has already been demonstrated, e.g., in the results documented in the annual certifications. They also cited favorable assessments developed by scientists and by the leaderships of other nuclear states. Senators speaking and voting against the treaty emphasized several points. First, they cited challenges that impede development and implementation of a stockpile stewardship program that could serve as an alternative to nuclear testing for stockpile validation. Key factors here included shortfalls in technical understanding and historical

experience. Second, CTBT opponents emphasized that SSP was a work in progress. As presented by the Administration, it is not programmed to bring core capabilities online prior to 2010. Furthermore, even if all capabilities are developed on schedule, if a zero-yield CTBT is accomplished before all of the SSP products are available, it will not be possible to validate them using nuclear tests. Finally, the inherent limitations of SSP were emphasized.

Notwithstanding the positions summarized here, some (not necessarily all) of the Senators who voted against the CTBT were prepared to endorse the SSP as a work in progress that is likely to have beneficial results even if, for the present, it is deemed incapable of substituting for nuclear testing for purposes of stockpile validation.

### **Options for Withdrawing from the Treaty**

CTBT proponents argued that ratification of the treaty was a low-risk decision. While (as summarized previously) they had confidence that stockpile stewardship would ensure the reliability and safety of American nuclear weapons, Safeguard F provided extra insurance. Specifically, Safeguard F provided the option for the President to withdraw from the treaty and resume testing if the safety and reliability of the stockpile could not be guaranteed.

Opponents of the CTBT argued that Safeguard F, as proposed by the President, was a very limited commitment that required many decisions prior to the point that the President would have to consider a decision to withdraw from the treaty. And, they argued, it provided no guarantee that the President would do anything more than be prepared to withdraw. Opponents emphasized the political difficulties (domestic and international) that would be associated with consideration of, let alone actual, withdrawal from a major international treaty. One opponent argued further that the provisions of the CTBT precluded making the safeguards package part of the treaty.

Speaking against ratification, a Senator argued that Safeguard F might not have any practical value, even if exercised, because the needed technical capabilities would not be likely to be sustained in the absence of a test program.

Treaty proponents made a number of points in response to these and related arguments. They concurred that willingness to take action, if needed, was a key concern; argued that the withdrawal provision is not unique to the CTBT; and suggested that past



precedents concerning non-use of withdrawal clauses have limited relevance absent compelling rationales for withdrawal that have not existed. In response to arguments that withdrawal would be unlikely, treaty proponents introduced Daschle Executive Amendment No. 2291, which would make Senate advice and consent subject to conditions. Section (6) of this amendment, in the view of treaty proponents, would require the President to consult with the Senate and withdraw from the treaty if the President were to determine that nuclear testing was needed to maintain a high level of confidence in the reliability and safety of the nuclear stockpile.

### **National Ignition Facility**

NIF is one of the key new technical capabilities being developed to enable the SSP. As such, it relates to the Panel's recommendation that certification involve weapons-related technical capabilities in addition to the weapons themselves. Treaty proponents did not emphasize NIF, the construction of which has encountered problems that have resulted in a DOE initiative to resolve issues. Several Senators who opposed ratification of the CTBT at this time pointed to the NIF to demonstrate that the SSP was not developing the needed technical capabilities on the required schedule.

### **Funding**

During debates, reference was made to a near-term SSP funding requirement of \$4.5 billion per year for 10 years. Senators opposed to the CTBT expressed doubts concerning the likelihood that SSP would be funded at this level. Some proponents of the treaty were prepared to recognize and respond to this issue, given treaty ratification.

## 1. INTRODUCTION

This document summarizes issues relevant to the annual certification process (ACP) and stockpile stewardship program (SSP) as developed during the Senate's October 1999 deliberations concerning the Comprehensive Test Ban Treaty (CTBT).<sup>1</sup> It has been prepared as part of the support being provided by the Institute for Defense Analyses to the congressionally mandated Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile. The Panel was established by Congress, through the National Defense Authorization Act of 1999,<sup>2</sup> to annually review and assess—

- The annual certification process, including the conclusions and recommendations resulting from the process, for the safety, security, and reliability of the nuclear weapons stockpile of the United States, as carried out by the directors of the national weapon laboratories
- The long-term adequacy of the process of certifying the safety, security, and reliability of the nuclear weapons stockpile of the United States
- The adequacy of the criteria established by the Secretary of Energy pursuant to section 3158 for achieving the purposes for which those criteria are established.<sup>3</sup>

---

<sup>1</sup> In the Annual Certification Process, the Secretary of Energy and Secretary of Defense report to the President concerning the safety and reliability of the nuclear weapons stockpile. These reports are based on inputs provided by the Directors of the National Laboratories, CINCSTRATCOM, and the Nuclear Weapons Council. The Stockpile Stewardship Program is a set of activities conducted by the Department of Energy to maintain confidence in the safety, reliability, and performance of nuclear weapons; a summary is provided in the U.S. Department of Energy, Office of Defense Programs, *Fiscal Year 2000 Stockpile Stewardship Plan Executive Overview*, March 1999. In addition to summarizing the SSP, this DOE document provides a copy of the December 1998 annual certification memorandum from the Secretaries of Energy and Defense.

<sup>2</sup> Strom Thurmond National Defense Authorization Act of 1999, Section 3159; also 112 STAT. 2258, Public Law 105-261—October 17, 1998.

<sup>3</sup> Section 3158 requires the Secretary of Energy to develop clear and specific criteria for judging whether the science-based tools being used by the Department of Energy for determining the safety and reliability of the nuclear weapons stockpile are performing in a manner that will provide an adequate degree of certainty that the stockpile is safe and reliable. *Strom Thurmond National Defense Authorization Act of 1999*, Section 3158; also 112 STAT. 2258, Public Law 105-261—October 17, 1998.

The Panel's current perspective on the issues addressed in this report is provided in its initial report to Congress.<sup>4</sup> The fundamental question being addressed by the Panel is, Can the Nation sustain confidence in its nuclear deterrence capability without returning to underground nuclear testing?

This paper is not a comprehensive summary of the primary Senate CTBT deliberations. Some topics that were prominent in the Senate debates have limited relevance for certification and stewardship, e.g., treaty verification technologies, and therefore are not examined or are addressed only to the extent that they impact directly on the ACP and SSP.

This paper begins with brief overviews of the CTBT,<sup>5</sup> Senate deliberations concerning the treaty, and developments subsequent to the October 1999 vote. It summarizes Senate deliberations concerning certification and the stockpile stewardship program.

Senate deliberations and materials introduced for the record<sup>6</sup> by Senators as reported in the *Congressional Record, Senate*, on October 8, 12, and 13, 1999, are the sources used to identify issues relevant to stockpile certification and stewardship.<sup>7</sup> These are not the only Senate considerations of CTBT; there were also important committee hearings (Appendix A).<sup>8</sup> However, these are the primary debates in which members spoke for the record to explain their votes to both Senate colleagues and their constituents. Because a time limit was set for debate, all Senators did not have an opportunity to articulate all of the points that might have influenced their decision.

---

<sup>4</sup> Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile, *FY 1999 Report to Congress*, November 1999.

<sup>5</sup> In general, the treaty is not referenced consistently. It is variably referenced as the Comprehensive Test Ban Treaty and the Comprehensive Nuclear Test-Ban Treaty. This paper uses the former title except where it cites a source titled differently or quotes a statement that references the treaty differently.

<sup>6</sup> In what follows such materials are attributed to the Senator who requested unanimous consent for the printing of the items in the *Congressional Record*.

<sup>7</sup> *Congressional Record, Senate*, October 8, 1999, pp. S12257-S12316; October 12, 1999, pp. S12329-S12405; S12427; October 13, 1999, pp. S12465-12469; S12474; S12504-12550. The *Congressional Record* is available on the Internet at <thomas.loc.gov>. The printed version is available in some libraries. The page numbers for quotations and citations in this document are based on the printed version of the *Congressional Record*. In a few instances, the pagination in the on-line version differs from the printed version.

<sup>8</sup> Some points made during committee presentations and deliberations were repeated by Senators during floor discussions and hence impact the sources and analysis provided in this report.

The examples of Senators' views presented in this report are illustrative but not exhaustive, either for individual members or the entire Senate. While there is necessarily some editorial judgment involved in the selection of remarks by Senators used to illustrate the positions of treaty proponents and opponents, the remarks selected are presented as given, with minimum editing. The issues addressed were complex; the precise statements, as made, matter.

Multiple types of "testing" have been used to develop and sustain the nuclear stockpile since its inception. Some of these tests do not result in a nuclear detonation, e.g., metallurgical and chemical tests. Some involve explosions, e.g., tests of the high explosives used in nuclear devices, but not nuclear detonations. "Nuclear testing" and "testing" in this paper are used to reference activities in which chemical-explosive-driven nuclear chain reactions go supercritical.<sup>9</sup>

At a number of points in this paper, the views of treaty proponents and opponents are contrasted. "Opponents" are Senators who voted against ratification; some of these Senators were in favor of having nuclear test limitations but were not prepared to support the proposed treaty in October 1999.

---

<sup>9</sup> This definition was suggested during hearings by the Director of Sandia National Laboratories; C. Paul Robinson, *Statement*, Committee on Armed Services, United States Senate, October 7, 1999, pp. 10-11.

## **2. DEVELOPMENT AND CONSIDERATION OF THE CTBT AND OTHER TEST LIMITATIONS**

### **SYNOPSIS**

Important prior test limitation treaties are the Limited Test Ban Treaty, which prohibits nuclear testing in the atmosphere, in outer space, and under water, and the Threshold Test Ban Treaty, which places a cap of 150 kilotons on underground nuclear detonations. Also important is the Treaty for the Non-Proliferation of Nuclear Weapons, which was extended indefinitely in 1995; concurrent with extension, a document was agreed that included the goal of concluding a comprehensive test ban.

Negotiations for a CTBT date back to the 1950s. The CTBT reviewed by the Senate was negotiated between 1994 and 1996 (some of the history is provided in Appendix B). President Clinton signed the treaty and sent it to the Senate for advice and consent in September 1997.

"Comprehensive" is a term of art that has had multiple meanings. During the most recent CTBT negotiations, the United States' position changed to favor a zero-yield CTBT, consistent with the Administration's interpretation of the treaty reviewed by the Senate.

By unanimous consent, the CTBT was brought to the floor of the Senate for debate and vote in October 1999. On October 13, the Senate did not ratify the treaty (which needed a two-thirds majority). The vote was as follows: 48 yeas, 51 nays, and 1 answered "present." Appendix B reviews the developments that resulted in the treaty reaching the Senate floor and summarizes the efforts that were made after the treaty reached the Senate floor to return it to committee and defer a final vote.

Subsequent to the Senate's vote, the Administration has announced that it will not resume testing and will otherwise act in accordance with the CTBT. The Administration has announced that it intends to work with Senators to address issues involving the treaty with the objective of obtaining Senate ratification in the future. The Administration has also conducted a review of the Stockpile Stewardship Program (SSP) and has an ongoing review of the National Ignition Facility, a key component within the SSP.

Disagreement exists concerning U.S. obligations, given that the Senate did not ratify the treaty. Proponents argue that the United States is, in accordance with Article 18 of Vienna Convention on the Law of Treaties, required to continue undertaking the obligations of a signatory. Treaty opponents argue that failure to ratify released the United States from any Article 18 obligations.

As is customary, the CTBT continues on the Executive Calendar of the Senate.

Senate 1812 is a resolution to establish a Commission on a Nuclear Testing Treaty. It was introduced by Senator John Warner and co-sponsored by Senators Susan Collins, Charles Hagel, Daniel Patrick Moynihan, Olympia Snowe, Gordon Smith, and Joseph Lieberman. The stated objective is to "build bridges and find common ground on the issue of a possible treaty covering nuclear testing." In introducing this resolution, Senator Warner suggested that some of the work being accomplished by the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile could be incorporated into the work of this commission.

Senate Majority Leader Trent Lott has proposed that (1) the Secretary of Defense initiate a review to identify ways in which the Administration and Congress could act together to strengthen the nuclear deterrent, and (2) the Senate undertake a major survey of the proliferation of weapons of mass destruction and associated means of delivery. The Administration does not appear to have made a public response to these proposals.

## **PREVIOUS TREATIES**

Three treaties establishing restrictions on nuclear testing prior to negotiation of the CTBT were the Limited Test Ban Treaty (LTBT), the Threshold Test Ban Treaty (TTBT), and the Peaceful Nuclear Explosions Treaty (PNET). The LTBT (1963) prohibits nuclear testing in the atmosphere, in outer space, and under water. The TTBT and PNET, negotiated in 1974 and 1976 respectively, set an upper limit of 150 kilotons on U.S. and Soviet underground nuclear detonations. The former applied to nuclear detonations carried out on designated test sites; the latter to nuclear detonations carried out outside such test sites. To alleviate concerns involving verification, the TTBT and PNET verification protocols were renegotiated in the late 1980s; the treaties were approved by the Senate and entered into force in 1990.

The Treaty for the Non-Proliferation of Nuclear Weapons (NPT) was negotiated in 1968 and extended at subsequent NPT review conferences. At the May 1995 NPT

Review and Extension Conference, States Parties agreed to the indefinite extension of the NPT. Concurrently, they adopted Principles and Obligations for Nuclear Nonproliferation and Disarmament, which included the goal of concluding a comprehensive test ban.

The United States, United Kingdom, and Soviet Union initiated comprehensive test ban discussions in October 1958. All announced unilateral moratoriums on nuclear testing in 1959. The United States and United Kingdom proposed a draft comprehensive test ban treaty in April 1961; it was rejected by the Soviet Union. The Soviets resumed testing in September 1961; the United States responded by resuming its test program.

## **DEVELOPMENTS PRIOR TO THE SENATE'S CONSIDERATION OF THE CTBT**

There has been a unilateral moratorium on U.S. nuclear testing since October 1992. In July 1993, President Clinton announced that he would continue this moratorium while seeking agreement on a treaty to prohibit testing of nuclear weapons.

Negotiations for a CTBT began in January 1994 at the Conference on Disarmament, a multilateral forum for arms control discussions and negotiations that meets in Geneva.<sup>1</sup> A draft agreement was concluded and opened for signature in September 1996. President Clinton signed the CTBT on September 24, 1996; he submitted it to the Senate for its advice and consent on September 22, 1997.

The Comprehensive Test Ban Treaty involves two basic obligations:

- 1) Each State Party undertakes not to carry out any nuclear weapon test explosion or any other nuclear explosion, and to prohibit or prevent any such nuclear explosion at any place under its jurisdiction or control.
- 2) Each State Party undertakes, furthermore, to refrain from causing, encouraging, or in any way participating in the carrying out of any nuclear weapon test explosion or any other nuclear explosion.<sup>2</sup>

"Comprehensive" has had multiple usages in the various CTBT proposals that have been developed since the late 1950s. As recently as the January 1994 commencement of the negotiations that resulted in the CTBT reviewed by Senate, the

---

<sup>1</sup> Appendix B provides a more detailed summary of the treaty's development, the unanimous consent procedures adopted for consideration of the treaty by the Senate, and attempts to defer Senate consideration of the CTBT.

<sup>2</sup> Comprehensive Nuclear-Test-Ban Treaty, Article I, Basic Obligations. During the Senate debates, the CTBT and associated documents were available to Senators in Senate Treaty Document 105-28.

United States' position was that the treaty should authorize hydronuclear experiments with very low yields.<sup>3</sup> During the course of the CTBT negotiations, the United States position changed to favor a zero-yield CTBT.<sup>4</sup>

## **SENATE DECISION**

By unanimous consent, the CTBT was brought to the floor of the Senate for debate and decision on October 8, 12, and 13, 1999.<sup>5</sup> For the Senate to advise and consent to the CTBT, affirmative votes were needed from two-thirds of the Senators present and voting. This did not occur; the vote on October 13 was 48 yeas, 51 nays, and 1 answered "present." Table 2-1 presents the rollcall vote.

## **DEVELOPMENTS SUBSEQUENT TO THE SENATE'S OCTOBER 13 VOTE**

### **Administration Position and Actions**

Even though the Senate voted not to ratify the CTBT, the President has stated that "we will not abandon the commitments inherent in the treaty, and resume testing ourselves."<sup>6</sup> No activities inconsistent with the CTBT have been announced or programmed by the Administration.

The Administration is reported to have contacted foreign governments, indicating its intent to seek reconsideration of the CTBT when conditions are better suited for ratification.<sup>7</sup> Senate Majority Leader Lott, on the other hand, is reported to have

---

<sup>3</sup> In hydronuclear experiments, some of the fissile material from a nuclear device is replaced by material that will not fission. When the high explosive in the device is detonated, a small amount of fission energy is released. The resulting yield might be no more than a few pounds (or less) of TNT-equivalent.

<sup>4</sup> Comments by Senator Jesse Helms and the Honorable Steven Ledogar, former chief U.S. negotiator for the CTBT, Senate Foreign Relations Committee, October 7, 1999.

<sup>5</sup> The complex set of proposals and actions involved in bringing the CTBT to the Senate floor for consideration and subsequent efforts to defer a vote on the treaty are outlined in Appendix B. A majority of the Senate was prepared to defer voting.

<sup>6</sup> President Clinton, *Press Conference by the President*, The White House, Washington, DC, October 14, 1999.

<sup>7</sup> Bill Gertz, "Albright Says U.S. Bound by CTBT," *The Washington Times*, November 2, 1999, p. 1.



contended that the Senate vote against CTBT ratification on October 13 releases the United States from any international legal obligations under the treaty.<sup>8</sup>

**Table 2-1. Rollcall Vote No. 325 Ex, Comprehensive Test Ban Treaty, October 13, 1999**

Yeas (48)		Nays (51)		Answered "Present" (1)
Akaka	Kennedy	Abraham	Hatch	Byrd
Baucus	Kerrey	Allard	Helms	
Bayh	Kerry	Ashcroft	Hutchinson	
Biden	Kohl	Bennett	Hutchison	
Bingaman	Landrieu	Bond	Inhofe	
Boxer	Lautenberg	Brownback	Kyl	
Breaux	Leahy	Bunning	Lott	
Bryan	Levin	Burns	Lugar	
Chafee	Lieberman	Campbell	Mack	
Cleland	Lincoln	Cochran	McCain	
Conrad	Mikulski	Collins	McConnell	
Daschle	Moynihan	Coverdell	Murkowski	
Dodd	Murray	Craig	Nickles	
Dorgan	Reed	Crapo	Roberts	
Durbin	Reid	DeWine	Roth	
Edwards	Robb	Domenici	Santorum	
Feingold	Rockefeller	Enzi	Sessions	
Feinstein	Sarbanes	Fitzgerald	Shelby	
Graham	Schumer	Frist	Smith (NH)	
Harkin	Smith (OR)	Gorton	Snowe	
Hollings	Specter	Gramm	Stevens	
Inouye	Torricelli	Grams	Thomas	
Jeffords	Wellstone	Grassley	Thompson	
Johnson	Wyden	Gregg	Thurmond	
		Hagel	Voinovich	
			Warner	

Source: *Congressional Record--Senate*, October 13, 1999, S12548.

Secretary of State Madeleine K. Albright announced the Administration's approach for bringing the CTBT forward for reconsideration:

To those Senators who want the Administration to bury the CTBT, we say "No, our national interests will not allow us to do that."...But to those who are willing to take a further look at the Treaty, we say, "How can we help?" For despite the Senate vote, the Treaty lives.

It is essential that the dialogue on CTBT continue and bear fruit. After all, the Administration and Congress have worked together on difficult national security issues before. A number of leading Senators from both parties have expressed interest in a bipartisan effort to move forward on

<sup>8</sup> Bill Gertz, "Lott Hits Clinton's Stance on Nuke Pact, Says He's Risking Ties with Senate," *The Washington Times*, November 3, 1999, p. 1.

CTBT now. In that spirit, I am announcing today that we will establish a high-level Administration task force to work closely with the Senate on addressing the issues raised during the test ban debate.

As we did with NATO enlargement, this team will also carry the dialogue to Americans from all walks of life to explain and analyze the Treaty.

In our discussions with the Senate, we will be open to a variety of possible approaches for bridging differences, including at an appropriate point the potential need for additional conditions and understandings, as was the case with the Chemical Weapons Convention.

Meanwhile, President Clinton has made it clear that the United States will continue to observe a moratorium on nuclear explosive tests and has urged all others to do the same. And we will continue to work with Congress to provide our share of support for preparatory work, including construction of the International Monitoring System.<sup>9</sup>

Secretary of Energy Bill Richardson announced an Administration initiative to review the Stockpile Stewardship Program:

Last night President Clinton reaffirmed that the United States will continue to observe—as we have done since 1992—a policy of not conducting nuclear tests. As Secretary of Energy, one of my most important responsibilities is to ensure that the U.S. nuclear stockpile remains safe, secure and reliable without nuclear testing. The U.S. nuclear deterrent remains a supreme national interest of the United States....

I have directed the Under Secretary of Energy Ernest J. Moniz to undertake a comprehensive review of the Stockpile Stewardship Program and to report back to me within 30 days. The review will examine the accomplishments of the program over the last three years and the program structure in meeting current and long-term needs for certifying the stockpile. This will form the basis for assessing whether the balance between program elements supports the national strategy.<sup>10</sup>

Results from this 30-day review have been published.<sup>11</sup>

---

<sup>9</sup> Secretary of State Madeleine K. Albright, *Remarks and Q&A Before the Chicago Council on Foreign Relations*, Chicago, Illinois, November 10, 1999. <<http://secretary.state.gov/www/statements/1999/991110a.html>>

<sup>10</sup> "U.S. Department of Energy, Statement by Secretary Richardson on Stockpile Stewardship," *U.S. Department of Energy News*, October 14, 1999.

<sup>11</sup> U.S. Department of Energy, *Stockpile Stewardship Program. 30-Day Review*, November 23, 1999.

Additionally, the Department of Energy has established a task force to review the National Ignition Facility, one of the key elements within the Stockpile Stewardship Program, to resolve problems that have been identified in development of this new capability.<sup>12</sup>

## **U.S. Obligations**

During consideration of the CTBT, Senators were in disagreement concerning the implications that would result from the vote not to ratify the treaty. Some of this disagreement involved Article 18 of the Vienna Convention on the Law of Treaties, to which the United States is a party:

A State is obliged to refrain from acts which would defeat the object and purpose of a treaty when:

(a) it has signed the treaty or has exchanged instruments constituting the treaty subject to ratification, acceptance, or approval, until it shall have made its intention clear not to become a party to the treaty; or

(b) it has expressed its consent to be bound by the treaty, pending the entry into force of the treaty and provided that such entry into force is not unduly delayed.<sup>13</sup>

Initial signature of a treaty and ratification by national authorities are typically separated in time. This convention provides that, following signature, a State Signatory shall not act in ways that would affect its ability to comply fully with the agreement that it has just signed, pending entry into force for it.

Proponents of the treaty argued that notwithstanding failure to ratify by the Senate, the United State's obligations as a signatory would remain until the President made clear that the United States no longer intended to become a party to the treaty:

[Senator Daschle] Now I have heard the latest rumor. In the last couple of hours, we are told that it is Article 18 of the Vienna Convention that requires us to act. Mr. President, nothing could be farther from the truth—nothing. Nothing in Article 18 requires us to vote. The obligations of a signatory have already attached to the United States and will continue

---

<sup>12</sup> U.S. Department of Energy, "Secretary of Energy Advisory Board will Review National Ignition Facility, Richardson Appoints Independent Panel of Experts," *U.S. Department of Energy News*, November 10, 1999.

<sup>13</sup> *Vienna Convention on the Law of Treaties*; signed at Vienna, May 23, 1969; entered into force, January 27, 1980. <gopher://gopher.law.cornell.edu:70/00/foreign/fletcher/treaties.txt>.

to do so until the President, only the President, makes clear the United States' intent not to become a party.<sup>14</sup>

Some treaty opponents, on the other hand, argued that a specific consequence of the Senate's decision not to ratify the CTBT was to release the United States from any Article 18 obligations:

[Senator Helms] Mr. President, when the debate ends today, there must be no ambiguity about the status of the CTBT. The Senate must make clear that this treaty is dead. Unless we vote to explicitly reject the CTBT, under customary international law the U.S. will be bound by the terms of the treaty. The CTBT will be effectively in force. That is an unacceptable outcome.<sup>15</sup>

[Senator Kyl] In rejecting the CTBT, the Senate is sending an explicit message that the United States does not have an international legal obligation to adhere to the provisions of the treaty. If the President were to determine that the United States must conduct tests to ensure the safety or reliability of our nuclear arsenal, the United States would be entitled to do so.<sup>16</sup>

Regarding the status of the treaty on the Senate's agenda, Senator Pete Domenici (who voted against the CTBT but earlier urged that a decision be deferred to the next Congress) stated:

Nonetheless, I might say treaties don't really die, even when they are defeated; they are returned to the Executive Calendar of the Senate. Therefore, we will have another chance to debate the Comprehensive Test Ban Treaty in the next Congress, or years thereafter....<sup>17</sup>

### **Proposed Commission on a Nuclear Testing Treaty**

Senate 1812 is a resolution introduced by Senator John Warner (with co-sponsors as noted earlier) and referred to the Committee on Foreign Relations to establish a Commission on a Nuclear Testing Treaty (Appendix C). The objective of this legislation (Appendix D) is "to build bridges and find common ground on the issue of a possible treaty covering nuclear testing."

---

<sup>14</sup> Senator Tom Daschle, *Congressional Record – Senate*, October 13, 1999, S12508.

<sup>15</sup> Senator Jesse Helms, *Congressional Record – Senate*, October 13, 1999, S12510.

<sup>16</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 13, 1999, S12529.

<sup>17</sup> *Congressional Record -- Senate*, October 13, 1999, p. S12531.

In his initial statement concerning the proposed Commission, Senator John Warner noted the relevance of the work being accomplished by the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile:

The Stockpile Stewardship Program was another issue of concern. In my view, it is just not far enough along, as confirmed by qualified experts, for the United States to stake the future of its nuclear arsenal on this alternative to actual testing. More needs to be done on that issue. For example, there is currently underway a panel, pursuant to a provision in the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999, to study and report on the reliability, safety and security of the U.S. nuclear stockpile. Perhaps some of the fine work of this commission, which is comprised of experts such as former Secretary of Defense James Schlesinger and Dr. Johnny Foster, could be incorporated into the work of a test ban commission.<sup>18</sup>

As proposed (Appendices C, D, E) the Commission would have four tasks that involve determining:

1. Under what circumstances a nuclear testing treaty would be in U.S. national security interests
2. How a nuclear testing treaty would relate to the security interests of other nations
3. Provisions essential to a nuclear testing treaty such that it would be in the national security interests of the United States
4. Whether a nuclear testing treaty would achieve U.S. non-proliferation and arms control objectives

The Commission's work program would include stockpile certification and stewardship issues being addressed by the Panel, plus other topics: <sup>19</sup>

1. The improvements required for both the United States and the international monitoring systems in order to enhance detection of nuclear tests to meet the requirements of any treaty that may be recommended by the Commission.
2. The elements of a verification regime that would be required in a nuclear testing treaty in order to minimize any detrimental impact of such treaty to the national security interests of the United States.
3. The current status of the science-based stockpile stewardship program of the Department of Energy, including the date by which the program is anticipated

---

<sup>18</sup> Senator Warner's Statement on the CTBT Commission, October 15, 1999, reproduced in Appendix D.

<sup>19</sup> Senate 1812, presented in Appendix C.

to be fully implemented and proven as a substitute approach for underground nuclear testing; and the dates of important milestones in the development of the program.

4. The capability of the stockpile stewardship program to assure the safety, reliability, and military viability of the United States nuclear weapons stockpile indefinitely, including the capability of the program—
  - A. to remanufacture, certify, and replace each component in the enduring stockpile;
  - B. to add all available, modern nuclear safety and use control devices to weapons in the enduring stockpile; and
  - C. to modify existing nuclear weapons or design new weapons to meet future military threats.
5. The criteria that would be utilized by appropriate officials of the United States (including the Secretary of Defense, the Secretary of Energy, the directors of the Department of Energy national laboratories, and the Commander-in-Chief of the United States Strategic Command) to determine when and if the United States should withdraw from a nuclear testing treaty under a supreme national interest clause of such treaty in order to resume another method of nuclear weapons tests, including underground tests.
6. Whether a nuclear testing treaty will disadvantage the United States with respect to the nuclear weapons maintenance and modernization programs carried out by other nations.
7. Whether a nuclear testing treaty that requires a zero yield is in the national security interests of the United States.
8. Whether a nuclear testing treaty of permanent duration is in the national security interests of the United States, or whether a treaty with periodic and mandatory reviews of the continuation of such treaty in force is preferable.
9. The capacity of a nuclear testing treaty to prevent, deter, or lessen the proliferation of crude, or first generation, nuclear weapons.
10. In the event a nuclear testing treaty receives the advice and consent to ratification of the Senate, the extent to which the actual or perceived decline in confidence in the United States nuclear deterrent would affect the national security of the United States and the security of our allies.
11. Whether the elimination of the United States nuclear capability would be in the national security interests of the United States, both currently and in the future.

## Proposed DoD and Senate Committee Reviews

Senate Majority Leader Lott has proposed two actions:

I know some will ask, so what happens next? The first thing that must be done is to begin a process to strengthen U.S. nuclear deterrence so that no one—whether potential adversary or ally—comes away from these deliberations with doubts about the credibility of the U.S. nuclear arsenal.

To this end, I have written to Secretary of Defense Bill Cohen asking that he initiate a comprehensive review of the state of the U.S. nuclear weapons stockpile, infrastructure, management, personnel, training, delivery systems, and related matters. The review would encompass activities under the purview of the Department of Defense and the new, congressionally mandated National Nuclear Security Administration. The objective of this review would be to identify ways the administration and Congress jointly can strengthen our nuclear deterrent in the coming decades, for example, by providing additional resources to the Stockpile Stewardship Program on which Senator Domenici is so diligently working, and that exists at our nuclear weapon labs and production plants. I have offered to work with Secretary Cohen on the establishment and conduct of such a review, and I hope Secretary Cohen will promptly agree to my request.

Second, the Senate should undertake a major survey of the proliferation of weapons of mass destruction and associated means of delivery as we approach the new millennium. A key aspect of this review should be an assessment of whether or to what extent U.S. policies and actions (or inactions) contributed to the heightened proliferation that has occurred over the past 7 years. We know that from North Korea to Iran and Iraq, from China to Russia, and from India to Pakistan, the next President will be forced to confront a strategic landscape that in many ways is far more hostile and dangerous than that which President Clinton inherited in January, 1993.”<sup>20</sup>

The Administration does not appear to have made a public response to these proposals.

---

<sup>20</sup> Senator Trent Lott, *Congressional Record – Senate*, October 13, 1999, S12550.

### 3. CERTIFICATION

#### SYNOPSIS

Since the mid-1990s, the Secretary of Defense and Secretary of Energy have been required to provide the President with an annual certification concerning the safety and reliability of the U.S. nuclear stockpile. To date, all of these reports have been positive, with no requirements identified for nuclear testing. Senate proponents of the CTBT gave emphasis to these recent annual certifications as the basis for having confidence in both current and longer-term capabilities for sustaining nuclear weapons without testing.

None of the Senators opposed to the treaty argued that there was an immediate need to resume testing. While not disputing the fact that recent annual certifications have not identified any significant issues, opponents of the CTBT emphasized the limits of what is being accomplished in annual weapons certification and stockpile stewardship or can be accomplished in the future. The absence of known problems, they argue, does not mean that there are no issues—some problems may not have been encountered previously.

#### ANNUAL CERTIFICATION PROCESS

The current Annual Certification Process (ACP) involves reviews and reports accomplished by the DOE national weapon laboratories and the project officer group established for each nuclear weapon in the stockpile. Based on these inputs, reviews are accomplished by the laboratory directors; Commander in Chief Strategic Command (USSTRATCOM) assisted by the USSTRATCOM Stockpile Assessment Team; and the Nuclear Weapons Council, assisted by its Standing and Safety Committee. The process culminates in a memorandum to the President that is co-signed by the Secretary of Energy and Secretary of Defense.<sup>1</sup> Figure 3-1 depicts the 1998 Nuclear Stockpile Certification, which was the latest version available to Senators during the October 1999 CTBT

---

<sup>1</sup> A more detailed description of the ACP is provided in Appendix A of Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile, *FY 1999 Report*, November 8, 1999.



deliberations. The key conclusion of the certification memorandum is that “the nuclear stockpile has no safety or reliability concerns that require underground testing at this time.”

DEC 11 1998

MEMORANDUM FOR THE PRESIDENT

SUBJECT: Nuclear Stockpile Certification

In response to your direction to conduct an annual certification of the nuclear weapons stockpile, we have thoroughly reviewed the safety and reliability of the stockpile under the Comprehensive Test Ban Treaty. The nuclear stockpile has no safety or reliability concerns that require underground testing at this time. Problems that have arisen in the stockpile are being addressed and resolved without underground nuclear testing to ensure the stockpile remains safe and reliable. In reaching this conclusion, we have obtained the advice of the Directors of the National Weapon Laboratories, the Commander in Chief, United States Strategic Command, and the Nuclear Weapons Council. We will continue to inform you annually on the safety and reliability of the nuclear weapons stockpile in the absence of underground nuclear testing, and in the context of the DOE's Stockpile Stewardship Plan.

Bill Richardson

William S. Cohen

Secretary of Energy

Secretary of Defense

Executed: December 22, 1998

Source: U.S. Department of Energy, Office of Defense Programs *Fiscal Year 2000 Stockpile Stewardship Plan Executive Overview*, March 1999, p. xii.

**Figure 3-1. 1998 Nuclear Stockpile Certification Memorandum**

As addressed in the next section, the Clinton Administration is employing the Stockpile Stewardship Program (SSP) as its mechanism for sustaining nuclear weapons and ensuring that they can be certified. Because SSP is closely associated with certification, a number of the remarks made by Senators associated the two. They are, however, distinct. While SSP is the mechanism currently being employed to sustain the stockpile, alternatives exist. For example, Representative Ed Markey and co-sponsors have proposed an alternative, smaller-scale, less expensive program that would involve fewer experiments and advanced facilities, relying instead on robust surveillance and occasional remanufacturing as needed.<sup>2</sup> Another option—development and validation of

---

<sup>2</sup> Representative Ed Markey, *Congressional Record – Extension of Remarks*, March 24, 1999, E554.

new weapons that would be inherently more robust and hence less in need of stewardship—was also addressed during the Senate's deliberations.<sup>3</sup>

## VIEWS OF TREATY PROPONENTS

Senate proponents of the CTBT gave emphasis to recent annual certifications of the stockpile as the basis for having confidence in both present-day and longer-term capabilities for sustaining nuclear weapons without testing:

[Senator Biden] One has to be an incredible pessimist to conclude that the 6,000 nuclear weapons configured in nine different warheads are going to atrophy after spending \$45 billion over the next 10 years, and after having been able to certify without testing for the last 3 years that it is in good shape....<sup>4</sup>

[Senator Levin] We know that our overall monitoring and verification capabilities are very capable today and will improve with the entry into force of the treaty. We know, despite a 7-year moratorium on nuclear testing, that the U.S. nuclear stockpile remains safe and reliable today. We haven't tested in 7 years. We have relied on our Stockpile Stewardship Program. That program is up and running. We rely on it every year for a certification that our stockpile is safe and reliable.<sup>5</sup>

[Senator Biden] Mr. President, I will pursue this more on Tuesday. I respectfully suggest that argument was based on a fallacy, and that is, the Stockpile Stewardship Program will not stay at zero until it is completed. We began this years ago. It is already working. We already use testing methods that do not require nuclear explosions.<sup>6</sup>

[Senator Daschle] As for the safety and reliability of our existing nuclear weapons, I am convinced that the science-based stockpile stewardship program will permit us to preserve our nuclear deterrent without testing. I acknowledge up front that this program, for which we are spending \$4.5 billion annually, is still evolving and it will be a few more years before we will know for certain its effectiveness. However, critics must also acknowledge three other facts. First, our nuclear weapons are safe and reliable today and are likely to remain so for another decade—with or without a stockpile program. Second, although not fully up and running, the stockpile stewardship program has already demonstrated its

---

<sup>3</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 13, 1999, S12538.

<sup>4</sup> Senator Joseph Biden, *Congressional Record – Senate*, October 8, 1999, S12262.

<sup>5</sup> Senator Carl Levin, *Congressional Record – Senate*, October 8, 1999, S12274.

<sup>6</sup> Senator Joseph Biden, *Congressional Record – Senate*, October 8, 1999, S12308

viability. Although we stopped testing nuclear weapons seven years ago, for the past four years the Department of Energy has been able to certify that our nuclear stockpile is safe and reliable. In order to make this certification, the Department has relied in part on data generated by the early phases of the stockpile stewardship program...<sup>7</sup>

[Senator Kerry] No one on the other side of the aisle is arguing that we should go out and test tomorrow. Why? Because we don't need to test tomorrow. We don't need to test next year. We don't need to test for the foreseeable future, according to most scientists in this country, because we don't test the nuclear explosion itself for the purposes of safety and for making judgments about the mechanics of both the electrical and mechanical parts of a nuclear warhead.<sup>8</sup>

[Senator Levin] It is argued that we need testing for the safety of our stockpile. The answer is that the stewards of the stockpile, the lab Directors, for the last 7 years have been certifying safety and reliability of the stockpile based not on testing, which we have given up for 7 years already, but based on a Stockpile Stewardship Program which has allowed them to certify with a high degree of confidence that our stockpile is safe and reliable, without one test in the last 7 years.<sup>9</sup>

[Senator Kerrey] The science-based Stockpile Stewardship Program, on which the United States is spending \$4.5 billion a year, is maintaining our technological edge without the need for further testing for the foreseeable future. This program is based on the most advanced science in the world. It is based on over 50 years of nuclear experience. It is based on the results of over 1,000 American nuclear tests. It is a program that relies on the ability and ingenuity of U.S. scientists to maintain our nuclear edge. But it is also a program that recognizes the need to build in adequate safeguards to ensure safety and reliability.

The Stockpile Stewardship Program requires a rigorous annual review of the entire nuclear stockpile. As a part of this regime, both the Secretary of Defense and the Secretary of Energy must certify to the President on an annual basis the stockpile is safe and is reliable. Should either Secretary be unable to offer this certification, the President, in consultation with Congress, is prepared to exercise the right of the United States to withdraw from the treaty and to resume testing.

---

<sup>7</sup> Senator Tom Daschle, *Congressional Record – Senate*, October 8, 1999, S12315.

<sup>8</sup> Senator John Kerry, *Congressional Record – Senate*, October 12, 1999, S12352.

<sup>9</sup> Senator Carl Levin, *Congressional Record – Senate*, October 12, 1999, S12358.

The United States has not conducted a nuclear test for over 7 years, but the American people should understand our nuclear stockpile is safe. Both the safeguards and the science exists to continue to assure its safety well into the future. And since we have made the decision we do not need to test, it only makes sense that we use the CTBT to end testing throughout the world.<sup>10</sup>

## VIEWS OF TREATY OPPONENTS

None of the Senators who opposed the treaty argued that there was an immediate need to resume testing. While not disputing the fact that recent annual certifications have not identified any significant issues, opponents of the CTBT emphasized the limits of what currently is accomplished in annual weapons or can be accomplished in the future:

[Senator Inhofe] Certification doesn't mean we have weapons we know will be operative at any point in the future. It merely says we don't know that they won't be; we don't know of any. We can certify we don't know of any problems. How can they know of problems, if they are not testing them? I think that is a very weak argument.<sup>11</sup>

[Senator Lott] Finally, and most important, since Stockpile Stewardship is supposed to tell us about problems, many of which we've never seen before—such as those caused by aging—how will we know if Stockpile Stewardship “works”? How will we know we're finding problems that we've never seen before?<sup>12</sup>

---

<sup>10</sup> Senator Robert Kerrey, *Congressional Record – Senate*, October 12, 1999, S12341.

<sup>11</sup> Senator James Inhofe, *Congressional Record – Senate*, October 8, 1999, S12271.

<sup>12</sup> Trent Lott, *Congressional Record – Senate*, October 8, 1999, S12288.

## 4. STOCKPILE STEWARDSHIP PROGRAM

### SYNOPSIS

The Stockpile Stewardship Program (SSP) is the centerpiece of the Department of Energy's programmatic initiative to sustain confidence in the nuclear stockpile without underground testing.<sup>1</sup> It includes:

- Operations associated with manufacturing, maintaining, refurbishing, surveilling, and dismantling the nuclear weapons stockpile
- Activities associated with the research, design, development, simulation, modeling, and nonnuclear testing of nuclear weapons
- Planning, assessment, and certification of nuclear safety<sup>2</sup>

In his September 22, 1997, *Letter of Transmittal* to the Senate, President Clinton presented a set of safeguards defining the conditions under which the United States could enter into a CTBT (Table 4-1).<sup>3</sup> Safeguards A through C relate to the SSP.<sup>4</sup>

SSP was a primary focus during Senate CTBT deliberations. Treaty proponents and opponents differed with respect to (1) testing and uncertainty, (2) capabilities for refurbishment and modernization, (3) the effectiveness of SSP, and (4) options for withdrawing from the treaty (Safeguard F). CTBT opponents also raised issues concerning the National Ignition Facility, and both opponents and proponents expressed concerns about long-term SSP funding.

---

<sup>1</sup> As noted in the preceding section, while the SSP is the mechanism for stockpile stewardship proposed by the Administration, there are alternatives that differ significantly in terms of technical focus and resource requirements.

<sup>2</sup> U.S. Department of Energy, Office of Defense Programs, *Fiscal Year 2000 Stockpile Stewardship Plan Executive Overview*, March 1999, p. 3.

<sup>3</sup> President William J. Clinton, Letter of Transmittal to the Senate of the United States, The White House, September 22, 1997. U.S. Department of State, *Comprehensive Test-Ban Treaty*. <[www.state.gov/global/arms/ctbtpage/ntbpage.html](http://www.state.gov/global/arms/ctbtpage/ntbpage.html)>

<sup>4</sup> Safeguards D and E involve verification technology and intelligence community capabilities while Safeguard F relates to the Annual Certification Process (ACP) addressed in the preceding section.

**Table 4-1. CTBT Safeguards**

<u>Safeguard A:</u> The conduct of a Science-Based Stockpile Stewardship Program to ensure a high level of confidence in the safety and reliability of nuclear weapons in the active stockpile, including the conduct of a broad range of effective and continuing experimental programs.
<u>Safeguard B:</u> The maintenance of modern nuclear laboratory facilities and programs in theoretical and exploratory nuclear technology which will attract, retain, and ensure the continued application of our human scientific resources to those programs on which continued progress in nuclear technology depends.
<u>Safeguard C:</u> The maintenance of the basic capability to resume nuclear test activities prohibited by the CTBT should the United States cease to be bound to adhere to this Treaty.
<u>Safeguard D:</u> Continuation of a comprehensive research and development program to improve our treaty monitoring capabilities and operations.
<u>Safeguard E:</u> The continuing development of a broad range of intelligence gathering and analytical capabilities and operations to ensure accurate and comprehensible information on worldwide nuclear arsenals, nuclear weapons development programs, and related nuclear programs.
<u>Safeguard F:</u> The understanding that if the President of the United States is informed by the Secretary of Defense and the Secretary of Energy (DOE)—advised by the Nuclear Weapons Council, the Directors of the DOE's nuclear weapons laboratories and the Commander of the U.S. Strategic Command—that a high level of confidence in the safety or reliability of a nuclear weapon type which the two Secretaries consider to be critical to our nuclear deterrent could no longer be certified, the President, in consultation with Congress, would be prepared to withdraw from the CTBT under the standard "supreme national interests" clause in order to conduct whatever testing might be required.

Source: President William J. Clinton, *Letter of Transmittal* to the Senate of the United States, The White House, September 22, 1997. <[www.state.gov/www/global/arms/ctbtpage/ntbpage.html](http://www.state.gov/www/global/arms/ctbtpage/ntbpage.html)> Safeguards were not designated by letters in the President's 1997 letter. This list employs the current descriptions for the safeguards, as referenced during the Senate's 1999 deliberations.

For testing and uncertainty, the key issue was: How much uncertainty concerning the nuclear stockpile is acceptable? Some Senate proponents of the CTBT agreed with opponents that nuclear testing is, from a technical standpoint, the best means available for validating stockpile performance. They could grant this point while still being prepared to accede to a zero-yield test ban because they believed that the alternatives to continued testing, particularly SSP, would provide sufficient confidence, and because the zero-yield ban was seen as contributing to important policy objectives. Treaty opponents, on the other hand, argued that the level of uncertainty that would result from cessation of nuclear testing was unacceptable.

With respect to capabilities for refurbishment and modernization, treaty proponents cited expert testimony and recent development of the B61-11 earth penetrating nuclear weapon as demonstrations that the ability to modernize the stockpile would be retained, given accession to the CTBT. Senators opposed to the CTBT

emphasized the difficulty of refurbishment, emphasizing such points as the need to develop replacement plutonium pits that cannot be tested, changes in materials and fabrication processes, and shortfalls in understanding.

Regarding the effectiveness of SSP, CTBT proponents argued that this has already been demonstrated, e.g., in the results documented in the annual certifications. They also cited favorable assessments developed by scientists and by the leaderships of other nuclear states.

Senators speaking and voting against the treaty emphasized several points. First, they cited challenges that impede development and implementation of a stockpile stewardship program that could serve as an alternative to nuclear testing for stockpile validation. Key factors here included shortfalls in technical understanding and historical experience. Second, CTBT opponents emphasized that SSP was a work in progress. As presented by the administration, it is not programmed to bring core capabilities online prior to 2010. Furthermore, even if all capabilities are developed on schedule, if a zero-yield CTBT is accomplished before all of the SSP products are available, it will not be possible to validate them using nuclear tests. Finally, the inherent limitations of SSP were emphasized.

Notwithstanding the positions summarized here, some (not necessarily all) of the Senators who voted against the CTBT were prepared to endorse the SSP as a work in progress that is likely to have beneficial results even if, for the present, it is deemed incapable of substituting for nuclear testing for purposes of stockpile validation.

CTBT proponents argued that ratification of the treaty was a low-risk decision. While (as summarized previously) they had confidence that stockpile stewardship would ensure the reliability and safety of American nuclear weapons, Safeguard F provided extra insurance. Specifically, Safeguard F provided the option for the President to withdraw from the treaty and resume testing if the safety and reliability of the stockpile could not be guaranteed.

Opponents of the CTBT argued that Safeguard F, as proposed by the President, was a very limited commitment that required many decisions prior to the point that the President would have to consider a decision to withdraw from the treaty. Moreover, it gave no guarantee that the President would do anything more than be prepared to withdraw. Opponents emphasized the political difficulties (domestic and international) that would be associated with consideration of, let alone actual, withdrawal from a major

international treaty. One opponent argued further that the CTBT precluded making the safeguards package part of the treaty.

Speaking against ratification, a Senator argued that Safeguard F might not have any practical value, even if exercised, because the needed technical capabilities would not be likely to be sustained in the absence of a test program.

Treaty proponents made a number of points in response to these and related arguments. They concurred that willingness to take action, if needed, was a key concern; argued that the withdrawal provision is not unique to the CTBT; and suggested that past precedents concerning non-use of withdrawal clauses have limited relevance absent compelling rationales for withdrawal that have not existed. Treaty proponents also responded to arguments that withdrawal would be unlikely by introducing Daschle Executive Amendment No. 2291, which would make Senate advice and consent subject to conditions. In the view of treaty proponents, Section 6 of this amendment would require the President to consult with the Senate and withdraw from the treaty if the President were to determine that nuclear testing was needed to maintain a high level of confidence in the reliability and safety of the nuclear stockpile.

The National Ignition Facility (NIF) is one of the key new technical capabilities being developed to enable the SSP.<sup>5</sup> As such, it relates to the Panel's recommendation that certification involve weapons-related technical capabilities in addition to the weapons themselves. Treaty proponents did not emphasize NIF, the construction of which has encountered problems that have resulted in a DOE initiative to resolve issues.<sup>6</sup> Several Senators who opposed ratification of the CTBT at this time pointed to the NIF to demonstrate that the SSP was not developing the needed technical capabilities on the required schedule.

During debates, reference was made to a near-term SSP funding requirement of \$4.5 billion per year for 10 years. Senators who opposed the CTBT expressed doubts

---

<sup>5</sup> NIF is one of the cornerstones of the SSP. NIF is intended to house the world's most powerful laser. It is intended to create, for the first time within a laboratory, brief bursts of self-sustaining fusion reactions. NIF will provide the temperatures and pressures needed to conduct experiments to validate weapon-physics computer codes and address important issues of stockpile stewardship. An overview is available in *1998 Annual Report, Lawrence Livermore Laboratory*. <[www.llnl.gov/director/annual-report98](http://www.llnl.gov/director/annual-report98)>

<sup>6</sup> U.S. Department of Energy, "Secretary of Energy Advisory Board Will Review National Ignition Facility," Richardson Appoints Independent Panel of Experts. *U.S. Department of Energy News*. November 10, 1999.



concerning the likelihood that SSP would be funded at this level. Some proponents of the treaty were prepared to recognize and respond to this issue, given treaty ratification.

## TESTING AND UNCERTAINTY

### Synopsis

For testing and uncertainty, the key issue was: How much uncertainty concerning the nuclear stockpile is acceptable? Some Senate proponents of the CTBT agreed with opponents that nuclear testing is, from a technical standpoint, the best means available for validating stockpile performance. While granting this point, CTBT proponents were prepared to accede to a zero-yield test ban because they believed that the alternatives to continued testing, particularly SSP, would provide sufficient confidence. Moreover, they contended that the zero-yield ban contributed to important policy objectives. Treaty opponents, on the other hand, argued that the level of uncertainty that would result from cessation of nuclear testing was unacceptable.

### Views of Treaty Proponents

[Senator Biden] What is true is that it is better to test if you want to know for certain whether weapons are reliable. I hope if I acknowledge that, he will acknowledge it is better not to test on one area: If you want to discourage others from testing. Just discourage. He does not have to agree it would do everything, just discourage. It is better not to test.<sup>7</sup>

[Senator Bingaman] The Comprehensive Test Ban Treaty, which is the issue now before us, raises the question of whether we can continue to maintain our nuclear deterrent and maintain our national security through having that nuclear deterrent under a regime of no additional nuclear testing. I believe we can.

I believe the benefits we derive from going ahead with this treaty and in slowing the spread, and the improvement, of nuclear weapons around the world by others make this treaty very much in our national interest.

Some have argued that without the ability to test nuclear weapons, we cannot have 100-percent confidence that those weapons will work as intended. I agree with that. I think it is undoubtedly true that an unlimited testing regime will give us a higher degree of confidence in our own nuclear weapons than no testing at all. Clearly, that is true for all of our potential adversaries as well. They will do better at developing weapons,

---

<sup>7</sup> Senator Joseph Biden, *Congressional Record – Senate*, October 12, 1999, S12379.

and they will have a more capable, reliable nuclear arsenal to point at us—potential adversaries will—if we go ahead and have them pursue unconstrained testing.

But we can, in my view, have sufficient confidence in the reliability of our weapons through the work we have labeled the Stockpile Stewardship Program. This is a program that has been discussed frequently on the Senate floor. It is one I have spent many hours studying and trying to understand in the nuclear weapons laboratories in my State—Los Alamos and Sandia. I think we need to balance against this concern about lack of 100 percent confidence. We need to balance against that the consequences that would result from a rejection of this treaty by the Senate.<sup>8</sup>

[Senator Kerry] Clearly the United States would have been better off if we had been able to negotiate a test ban that allowed us to continue testing. But it is ridiculous to argue that, because the CTBT does not protect the U.S. advantage, it represents a dangerous capitulation on our part. To implement and verify a zero-yield test ban, we need not be worried about distinguishing between a low-yield test and a medium-yield test to determine if the Treaty has been violated. Any test of any yield is a violation. In this regard, the Treaty's strength is its simplicity.<sup>9</sup>

### **Views of Treaty Opponents**

[Senator Kyl] As the Senate weighs whether to approve the Comprehensive Test Ban Treaty (CTBT), we believe Senators will be obliged to focus on one dominant, inescapable result were it to be ratified: over the decades ahead, confidence in the reliability of our nuclear weapons stockpile would inevitably decline, thereby reducing the credibility of America's nuclear deterrent.<sup>10</sup>

[Senator Inhofe] It is indeed correct that the United States would be ill-advised to place a sophisticated nuclear explosive design into the stockpile that had not been previously tested and validated. There is no question that actual testing of designs to confirm their performance is the desired regimen of any high technology device, from cars and airplanes to medical equipment and computers. For a device as highly consequential as a nuclear weapon, testing of the complete system, both when it is first developed and periodically throughout its lifetime to ensure that aging effects do not invalidate its performance, is also the preferred

---

<sup>8</sup> Senator Jeff Bingaman, *Congressional Record—Senate*, October 8, 1999, S12296.

<sup>9</sup> Senator John Kerry, *Congressional Record—Senate*, October 12, 1999, S12351.

<sup>10</sup> Senator Jon Kyl, *Congressional Record—Senate*, October 8, 1999, S12258, quoting from letter from six former Secretaries of Defense.

methodology. I and others who are or have been responsible for the safety and reliability of the United States stockpile for nuclear weapons have testified to this obvious conclusion many times in the past. To forgo that validation through testing is, in short, to live with uncertainty.

I don't want to live with uncertainty. There is no way of knowing that we have a nuclear deterrent if we have to live with uncertainty.<sup>11</sup>

## **CAPABILITIES FOR REFURBISHMENT AND MODERNIZATION**

### **Synopsis**

Treaty proponents cited expert testimony and recent development of the B61-11 earth penetrating nuclear weapon as demonstrations that the ability to modernize the stockpile would be retained, given accession to the CTBT. Senators who opposed the CTBT emphasized the difficulty of refurbishment,<sup>12</sup> emphasizing such points as the need to develop replacement plutonium pits that cannot be tested, changes in materials and fabrication processes, and shortfalls in understanding.

### **Views of Treaty Proponents**

[Senator Kerry] ...Moreover, we have already proven that we can make modifications to existing designs without nuclear testing. In 1998, we certified the reliability of the B-61 Mod 11, which replaced an older weapon in the stockpile, without conducting a nuclear test.<sup>13</sup>

[Senator Biden] The argument has been made that the United States will not be able to modernize its deterrent arsenal to meet new threats or encounter new technologies under the Strategic Stockpile Stewardship Program, and that is why some of my colleagues are saying we cannot go ahead with this treaty.

I want to make it clear, the test ban treaty does not prevent us from adapting most operational characteristics of a nuclear weapons system to changing military missions, should we determine we have to do that. Many important parts of a nuclear weapon can confidently be developed, tested,

---

<sup>11</sup> Senator James Inhofe, *Congressional Record – Senate*, October 8, 1999, S12271-S12272, quoting testimony given by Dr. C. Paul Robinson, Director and President of Sandia National Laboratories, in the first paragraph.

<sup>12</sup> For immediate purposes, “refurbishment” refers to activities that maintain current inventory weapons at the level of capability originally defined for a system. “Modernization” involves developing new capabilities, e.g., through modifications to stockpile weapons.

<sup>13</sup> Senator John Kerry, *Congressional Record – Senate*, October 12, 1999, S12352.

and integrated into nuclear weapons without any nuclear tests because they do not involve changes in the primary or secondary components of the warhead; that is, the so-called physics package.

Dr. Paul Robinson, the Director of the Sandia National Laboratory, told the Armed Services Committee on Thursday night: Adapting deployed nuclear designs to new delivery systems, or even other delivery modes, is not constrained by the elimination of nuclear yield testing.

Let me put this in ordinary English. We keep being told here what has happened is, if we sign on to this treaty without this Stockpile Stewardship Program being fully completed, we are going to put ourselves at great disadvantage, amounting to nuclear disarmament; we will not be able to modernize our systems, and our systems are going to atrophy.

Dr. Robinson, the Director of Sandia, went on to describe a prominent success in the Stockpile Stewardship Program that is working now. We have nine deployed systems, nine different kinds of nuclear bombs. One of them is the B61 Mod-7 strategic bomb. That was adapted without any nuclear tests.

I have a photograph of that I will hold up now. That is a B-1 bomber. That red missile that is being dropped out of the belly of that bomber is a change in the B61 Mod-7 to a B61 Mod-11, in response to a different requirement.

What was the different requirement? The military said they needed a nuclear weapon that could destroy targets that were buried very deeply in the ground, and that Mod-7 version of the B61 nuclear warhead could not do that. So without any nuclear test, they tested a new system. It is called the Mod-11. That can penetrate the Earth deeply and destroy deeply buried targets.

This picture illustrates an important fact. You can test nearly everything in a nuclear weapon so long as you do not put enough nuclear material in it to cause an uncontrolled chain reaction. We did not set off this bomb, but we did test the bomb. You can take the plutonium out of the bomb, and put uranium in the bomb, and you can test it. It just doesn't set off this uncontrolled chain reaction. So this idea that we cannot change anything in our arsenal if we sign on to this is simply not correct.

By the way, the JASON Group, which is the most prestigious group of nuclear scientists in the United States of America, studied this, and they said the Strategic Stockpile Stewardship Program can maintain all of our systems. One particular member of that group, testifying before the committee, Dr. Garwin, points out that we can even exchange entire physics packages; that is the plutonium and that secondary package, that device that explodes it, that blows up. In my visual image of it, the best way to explain it, as I was trying to explain it to my daughter who is a freshman in college, what happens is you get this plutonium, and you have

to have something to ignite it, set it off. So there is a secondary explosion that takes place, and it shoots all these rods into this plutonium at incredible speeds.

I yield myself 2 more minutes.

What happens is it detonates the weapon, this chain reaction starts, and you have a thermonuclear explosion.

The question has been raised whether or not, if we figured out that this plutonium was no longer either stable or functional or was not reliable, could you take out of the warhead the thing that makes it go boom, the thing that causes the chain reaction, the thermonuclear explosion, and put a new package in? Dr. Garwin says you sure can do that, without testing, without nuclear tests.

This year, the first W-87—that is another warhead—life extension unit was assembled in February for the Air Force at the Y12 plant in Oak Ridge. It met the first production milestone for the W-87 life extension.

These are major milestones and successes in the Stockpile Stewardship Program. I might add, as my friend from Massachusetts knows, nobody is suggesting we start to test now—nobody that I am aware of. I should not say nobody. Nobody I am aware of. There may be somebody suggesting it.

Preservation of the option of modernizing U.S. nuclear weapons to counter emerging defensive technologies, the phrase you hear, does not require ongoing nuclear testing. The most likely countermeasures would involve changes to the missile and its reentry system, not to the nuclear explosive.

It is a red herring to suggest if we sign on to this treaty, we are locking ourselves into a system that is decaying and moving into atrophy and we are going to find ourselves some day essentially unilaterally disarmed. That is a specious argument.<sup>14</sup>

### **Views of Treaty Opponents**

[Senator Kyl] Remanufacturing components of existing weapons that have deteriorated also poses significant problems. Over time, manufacturing processes will change, some chemicals previously used in the production of our weapons have been banned by environmental regulations, and our documentation of the technical characteristics of older weapons, in some cases, is incomplete. Furthermore, as James Schlesinger—who formerly served as Secretary of Defense and Secretary of Energy—has testified to the Senate, the plutonium pits in some of our

---

<sup>14</sup> Senator Joseph Biden, *Congressional Record—Senate*, October 12, 1999, 12355-12356.

weapons will last 35 years. Since many of the pits used in the current arsenal are about 30 years old, this means that we will soon need to replace these pits. But, without testing, we will never know if these replacement parts will work as their predecessors did.<sup>15</sup>

[Senator Kyl] Key components of nuclear warheads are “aging” by radioactive decay and chemical decomposition and corrosion. Periodic remanufacture is necessary, but may copy existing defects and introduce additional defects. Some of the remanufactured parts may differ significantly from the original parts—due to loss of nuclear test validated personnel who manufactured the original parts, the use of new material and fabrication processes, and inadequate specification of original parts. There are significant risks of reducing stockpile reliability when remanufactured parts are involved in warhead processes where there are major gaps in our scientific understanding.<sup>16</sup>

[Senator Kyl] Remanufacturing components of existing weapons that have deteriorated also poses significant problems. Manufacturers go out of business, materials and production processes change, certain chemicals previously used in production are now forbidden under new environmental regulations, and so on. It is a certainty that new processes and materials—untested—will be used. Even more important, ultimately the nuclear “pits” will need to be replaced—and we will not be able to test those replacements. The upshot is that new defects may be introduced into the stockpile through remanufacture, and without testing we can never be certain that these replacement components will work as their predecessors did.<sup>17</sup>

## EFFECTIVENESS OF SSP

### Synopsis

CTBT proponents argued that the effectiveness of SSP has already been demonstrated, e.g., in the results documented in the annual certifications. They also cited favorable assessments developed by scientists and by the leaderships of other nuclear states.

---

<sup>15</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 8, 1999, S12259.

<sup>16</sup> *Ibid.*, quoting a letter written by former LLNL Director Nuckolls.

<sup>17</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 8, 1999, S12282; quotation in text taken from letter from former Secretaries of Defense.

Senators speaking and voting against the treaty emphasized several points. First, they cited challenges that impede development and implementation of a stockpile stewardship program that could serve as an alternative to nuclear testing for stockpile validation. Key factors here included shortfalls in technical understanding and historical experience. Second, CTBT opponents emphasized that SSP was a work in progress. As presented by the Administration, it is not programmed to bring core capabilities on-line prior to 2010. Furthermore, even if all capabilities are developed on schedule, if a zero-yield CTBT is accomplished before all of the SSP products are available, it will not be possible to validate them using nuclear tests. Finally, the inherent limitations of SSP were emphasized.

Notwithstanding the positions summarized here, some (not necessarily all) of the Senators who voted against the CTBT were prepared to endorse the SSP as a work in progress that is likely to have beneficial results even if, for the present, it is deemed incapable of substituting for nuclear testing for purposes of stockpile validation.

### **Views of Treaty Proponents**

[Senator Levin] This isn't some future concept that is being discussed. It is a Stockpile Stewardship Program that is, of course, not finished. It may never be finished. But it has made significant progress. We rely on it. We have invested billions in it. And our lab Directors have said three times, based on a Stockpile Stewardship Program that we now have up and running, that our nuclear inventory is safe and reliable. Without that stewardship program, they cannot make those certifications now on which we so heavily rely.

So the Stockpile Stewardship Program is already serving as a basis for certifying safety and reliability of this stockpile. We also know that its capabilities will improve substantially in the future, but that if at any point in the future the Stockpile Stewardship Program is not adequate to certify the safety and reliability of our stockpile at that point under the guarantees that are in the letter from the President—and that we will write into the ratification resolution— then the United States will exercise its supreme national interest clause and begin testing again.<sup>18</sup>

[Senator Biden] ...Fully informed technical studies have concluded that continued nuclear testing is not required to retain confidence in the safety, reliability and performance of nuclear weapons in the United States'

---

<sup>18</sup> Senator Carl Levin, *Congressional Record – Senate*, October 8, 1999, S12274.

stockpile, provided science and technology programs necessary for stockpile stewardship are maintained.<sup>19</sup>

[Senator Dorgan] A physicist yesterday said: We have had them for 40 and 50 years. We know how they work. We know how to safeguard them. We know how to keep them over time. Yet we have people on the floor of the Senate talking about the fact that the stockpile may not be safe.

One of my colleagues said: Drop some of them on your State. You think they'd work? Of course they would. You would not, in a million years, guess about whether it would detonate on your State if a nuclear weapon were aimed at your State. We know our stockpile works and is maintained at great cost.<sup>20</sup>

[Senator Moynihan] Opponents of the treaty claim that, without testing, it will not be possible to guarantee the continuing safety and reliability of nuclear weapons. All nuclear powers, including the United States, Britain and France, examined this issue carefully. All reached the same conclusion. With the right investment and modern technology, the necessary assurance of safety and reliability can be maintained without further nuclear tests.<sup>21</sup>

## **Views of Treaty Opponents**

### **Limited Scientific Understanding and Historical Experience**

[Senator Kyl] The fact is that, despite our technical expertise, there is much that we still do not understand about our own nuclear weapons. As C. Paul Robinson, Director of the Sandia National Laboratory has said, "some aspects of nuclear explosive design are still not understood at the level of physical principles."<sup>22</sup>

[Senator Kyl] ...Of all nuclear weapon designs fielded since 1958, approximately one-third have required nuclear testing to resolve problems arising after deployment.<sup>23</sup>

---

<sup>19</sup> Senator Joseph Biden, *Congressional Record – Senate*, October 8, 1999, S12262, quoting from statement signed by Nobel Laureates in Physics.

<sup>20</sup> Senator Byron Dorgan, *Congressional Record – Senate*, October 8, 1999, S12278.

<sup>21</sup> Senator Daniel Patrick Moynihan, *Congressional Record – Senate*, October 8, 1999, S12269, quoting from letter signed by President Chirac, Prime Minister Blair, and Chancellor Schroeder.

<sup>22</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 8, 1999, S12259.

<sup>23</sup> *Ibid.*, quoting then-President George Bush's January 1993 report to Congress.



[Senator Kyl] The Stockpile Stewardship Program faces tremendous technical challenges. As the Director of Sandia National Laboratories, Dr. Robinson has said, "the commercially available and laboratory technologies of today are inadequate for the stockpile stewardship tasks we will face in the future. Another hundred-to-thousand-fold increase in capability from hardware and software combined will be required."

Dr. Victor Reis, the architect of the stewardship program, said this about it during a speech in Albuquerque:

Think about it—we are asked to maintain forever, an incredibly complex device, no larger than this podium, filled with exotic, radioactive materials, that must create, albeit briefly, temperatures and pressures only seen in nature at the center of stars; do it without an integrating nuclear test, and without any reduction in extraordinarily high standards of safety and reliability. And, while you're at it downsize the industrial complex that supports this enterprise by a factor of two, and stand up critical new manufacturing processes. This within an industrial system that was structured to turn over new designs every fifteen years, and for which nuclear explosive testing was the major tool for demonstrating success.<sup>24</sup>

[Senator Kyl] ...and over time in nuclear materials and high-explosive triggers in our weapons deteriorate, and we lack the experience in predicting the effect of these changes.

[Senator Kyl] Some of the materials used in our weapons, like plutonium, enriched uranium, and tritium, are radioactive materials that decay, and as they decay they also change the properties of other materials within the weapon. We lack experience in predicting the effects of such aging on the safety and reliability of our weapons.

[Senator Kyl] We did not design weapons to last forever. The shelf life of our weapons was expected to be about 20 years.<sup>25</sup>

[Senator Kyl] This is not a matter of conjecture, but a lesson learned through hard experience. For example, in the case of one nuclear system—the warhead of the Polaris (SLBM)—testing allowed us to fix defects that were suddenly discovered. Until corrected, these defects could have rendered the vast majority of weapons in our sea-based deterrent completely inoperable.<sup>26</sup>

---

<sup>24</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 8, 1999, S12259-12260.

<sup>25</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 8, 1999, S12259.

<sup>26</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 8, 1999, S12259; quoting a statement made by former Secretary of Defense Casper Weinburger.

## SSP as Work-in-Progress

[Senator Hagel] We might be able to do that with computers and other means, other than testing. That may well be feasible. But I want to be assured a lot more than I am now that, in fact, can be done without jeopardizing the security of the United States.<sup>27</sup>

[Senator Lugar] At present, I am not convinced the Stockpile Stewardship Program will permit our experts to maintain a credible deterrent in the absence of testing. Without a complete, effective, and proven Stockpile Stewardship program, the CTBT could erode our ability to discover and fix problems with the nuclear stockpile and to make safety improvements.<sup>28</sup>

[Senator Hutchison] On the issue of reliability, nuclear tests are the only proven method to assure confidence in the reliability and safety of our nuclear weapons. We have heard testimony to this effect from scientists and other experts. They worry that as we make advances in material science and component technology for these very complex weapons, the inability to test these advances through actual detonations will leave us with doubt about whether they will work if used.

This treaty prohibits all nuclear tests, even of the lowest yield. The new diagnostic tools are still unbuilt and unproven. Scientists admit with humility that actual tests have often radically altered their chalkboard theories drawn out in the laboratory. At this point, anything short of testing is not sufficient to assure reliability and safety. Reliability of our weapons means they will work as intended. So it is clear that reliability is key to our national strategy.<sup>29</sup>

[Senator Kyl] But the fact is that the scientific case simply has not been made that, over the long term, the United States can ensure the nuclear stockpile without nuclear testing. The United States is seeking to ensure the integrity of its nuclear deterrent through an ambitious effort called the Stockpile Stewardship Program. This program attempts to maintain adequate knowledge of nuclear weapons physics indirectly by computer modeling, simulation, and other experiments. We support this kind of scientific and analytical effort. But even with adequate funding—which is far from assured—the Stockpile Stewardship Program is not

---

<sup>27</sup> Senator Charles Hagel, *Congressional Record – Senate*, October 8, 1999, S12270.

<sup>28</sup> Senator Richard Lugar, *Congressional Record – Senate*, October 8, 1999, S12314.

<sup>29</sup> Senator Kay Bailey Hutchison, *Congressional Record – Senate*, October 8, 1999, S12273.

sufficiently mature to evaluate the extent to which it can be a suitable alternative to testing.<sup>30</sup>

[Senator Kyl] But as former Secretary of State Henry Kissinger, former National Security Advisor Brent Scowcroft, and former CIA Director John Deutch said in a letter this week, "the fact is that the scientific case simply has not been made that, over the long term, the United States can ensure the nuclear stockpile without nuclear testing."<sup>31</sup>

[Senator Allard] Some of the CTBT proponents believe that the Stockpile Stewardship Program is the antidote to nuclear testing. This program supposes to be able to simulate nuclear explosions through the use of computer modeling. The estimate is that the program will cost at least \$4.5 billion a year over 10 years. While Stockpile Stewardship may be the answer in the future, the problem is that with any scientific experiment you must have a comparable element, and in this case a nuclear test. The best way to ensure that the Stockpile Stewardship program is working is to ensure that the results of the model match the results of a test. We must be able to calibrate the model before we should end all testing. I believe this is the height of irresponsibility.<sup>32</sup>

[Senator Kyl] Explosive nuclear testing is a proven method of identifying stockpile problems. The Stockpile Stewardship Program is not yet in place and is therefore unproved. Deciding in 1999 to forgo testing and instead to rely on a program that will be in place in 2010—it all goes well—is, in short, irresponsible.<sup>33</sup>

[Senator Byrd] Can we really trust an untested Stockpile Security Program to maintain our arsenal of nuclear weapons, and what signal will we be sending to the rest of the world if we find flaws in the program or in our weapons, flaws that mandate live testing to fix the weapons? These types of questions require time and research to fully explore. We have neither the time nor the information we need on this treaty.<sup>34</sup>

---

<sup>30</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 8, 1999, S12283-S12284, quoting from letter signed by Brent Scowcroft, Henry A. Kissinger, and John Deutch.

<sup>31</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 8, 1999, S12259.

<sup>32</sup> Senator Wayne Allard, *Congressional Record – Senate*, October 8, 1999, S12279.

<sup>33</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 8, 1999, S12282, quoting from a letter written by former Senator Dole.

<sup>34</sup> Senator Robert Byrd was not an opponent of the treaty; he answered "present." Senator Byrd, *Congressional Record – Senate*, October 13, 1999, S12523.

## Limitations of SSP

[Senator Kyl] We have embarked on a “stockpile stewardship program” designed to use science, other than nuclear testing, to ensure that the present weapons in our nuclear deterrent remain safe, secure and reliable. The estimates I’ve seen are that we will spend about \$5 billion each year on that program. Over twenty years, if the program is completely successful, we will have spent about \$100 billion, and we will have replaced nearly every single part in each of those complex weapons. At the end of that period, about the best that we will be able to say is that we have a stockpile of “restored” weapons of at least thirty-year-old design that are probably safe and secure and whose reliability is the best we can make without testing. We will not be able to say that the stockpile is modern, nor will we be assured that it is usable in the sense of fitting the security situation we will face twenty years hence. To me that seems to foretell a situation of increasing vulnerability for us and our friends and allies to threats from those who will not be deterred by the Nonproliferation Treaty or the CTBT, and there will surely be such states.<sup>35</sup>

## Support for SSP by Treaty Opponents

[Senator Kyl] The Clinton administration has proposed a program that it hopes will replace actual nuclear tests with computer simulations and a much greater emphasis on science-based experiments. It is called the Stockpile Stewardship Program. According to the Fiscal Year 2000 Stockpile Stewardship Plan Executive Overview, released by the Department of Energy in March this year:

The overall goal of the Stockpile Stewardship program is to have in place by 2010...the capabilities that are necessary to provide continuing high confidence in the annual certification of the stockpile without the necessity for nuclear testing.

I support the Stockpile Stewardship Program because it will improve our knowledge about our nuclear weapons....<sup>36</sup>

[Senator Kyl] While the Stockpile Stewardship program is worth pursuing, it should be viewed as a complement to our nuclear testing program—not a substitute for it.<sup>37</sup>

---

<sup>35</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 8, 1999, S12283, quoting from a letter from former JCS Chairman Jack Vessey.

<sup>36</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 8, 1999, S12259-12260.

<sup>37</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 8, 1999, S12282, quoting from a letter written by former Senator Robert Dole.

## OPTIONS FOR WITHDRAWING FROM THE TREATY (SAFEGUARD F)

### Synopsis

CTBT proponents argued that ratification of the treaty was a low-risk decision. While (as summarized previously) they had confidence that stockpile stewardship would ensure the reliability and safety of American nuclear weapons, Safeguard F (Table 4-1, above) provided extra insurance. Specifically, Safeguard F provided the option for the President to withdraw from the treaty and resume testing if the safety and reliability of the stockpile could not be guaranteed.<sup>38</sup>

Opponents of the CTBT argued that Safeguard F, as proposed by the President, was a very limited commitment that required many decisions prior to the point that the President would have to consider a decision to withdraw from the treaty. And, they argued, it provided no guarantee that the President would do anything more than be prepared to withdraw. One opponent argued further that the CTBT precluded making the safeguards package part of the treaty.

Opponents emphasized the political difficulties (domestic and international) that would be associated with consideration of, let alone actual, withdrawal from a major international treaty. These issues were addressed in a dialogue between Senator Specter (a CTBT proponent) and Senator Warner (who voted against the treaty).

Speaking against ratification, a Senator argued that Safeguard F might not have any practical value, even if exercised, because the needed technical capabilities would not be likely to be sustained in the absence of a test program.

Treaty proponents made a number of points in response to these and related arguments. They concurred that willingness to take action, if needed, was a key concern; argued that the withdrawal provision is not unique to the CTBT; and suggested that past

---

<sup>38</sup> The CTBT (Article IX, Duration and Withdrawal) makes provision for withdrawal:

1. This Treaty shall be of unlimited duration.
2. Each State Party shall, in exercising its national sovereignty, have the right to withdraw from this Treaty if it decides that extraordinary events related to the subject matter of this Treaty have jeopardized its supreme interests.
3. Withdrawal shall be effected by giving notice six months in advance to all other States Parties, the Executive Council, the Depository, and the United Nations Security Council. Notice of withdrawal shall include a statement of the extraordinary event or events which a State Party regards as jeopardizing its supreme interests.

precedents concerning non-use of withdrawal clauses have limited relevance absent compelling rationales for withdrawal that have not existed. Treaty proponents also responded to arguments that withdrawal would be unlikely by introducing Daschle Executive Amendment No. 2291, which would make Senate advice and consent subject to conditions. Section 6, in the view of treaty proponents, would require the President to consult with the Senate and withdraw from the treaty if the President were to determine that nuclear testing was needed to maintain a high level of confidence in the reliability and safety of the nuclear stockpile.

## **Views of Treaty Proponents**

### **The CTBT as Negotiated**

[Senator Kerry] The CTBT binds us to a decision we have already made, because it is in our national interests to stop testing. And if, at some point down the line, it becomes necessary to resume testing to preserve the reliability of our nuclear deterrent, we can withdraw from the Treaty to do so.<sup>39</sup>

[Senator Levin] We have informed every signatory that is what we will have the right to do. We have put all the parties on notice as to what our supreme national interest is. We have said that if we can't certificate safety and reliability without testing—and we believe that we can do it without testing—we will then return to testing.<sup>40</sup>

[Senator Biden] Again, as usual, my friend from Georgia goes to the heart of the issue. If you put everything else aside, you take all the detail away, you will find at its root—I am not suggesting that everybody who opposes this treaty doesn't believe everything they are saying; they do. But at its root, it comes down to a belief that has been the case in almost all the debates on treaties—and I am not suggesting that everybody has opposed every treaty. But they have argued one final piece, and that is simply that they lack faith in the political will of this country to do whatever is required. That has been the closing and legitimate argument raised. It was raised in START I, START II, SALT I, and SALT II.

The issue was whether or not we would so change the political climate that we lull ourselves to sleep. My friend from New Mexico remembers the argument that we would not have the political will to

---

<sup>39</sup> Senator John Kerry, *Congressional Record – Senate*, October 12, 1999, S12352.

<sup>40</sup> Senator Carl Levin, *Congressional Record – Senate*, October 8, 1999, S12274.

reengage. It is a legitimate argument. I do not give it short shrift. I think it is the single most serious argument against this treaty.<sup>41</sup>

[Senator Specter] However, when we talk about the withdrawal provision, that is not unique to the Comprehensive Test Ban Treaty. We have debated repeatedly on the floor of this Senate the provisions of the Anti-Ballistic Missile Treaty, which allows withdrawal on notice—again, for supreme national interests. So the insertion of this clause in the treaty is no signal that we are considering using it. I think that is a standard provision.<sup>42</sup>

[Senator Biden] The second point. The Senator says, “Have we ever exercised this clause?” The appropriate question is, Have we ever needed to? The answer is, We have never concluded we needed to. Such a clause, or a variation, is in every treaty the United States of America signs. This is a bit of a red herring. In every treaty we sign of consequence relating to our national security, there is a supreme national interest clause. The reason we haven't exercised it is that no President has concluded there was a need.<sup>43</sup>

#### **Daschle Executive Amendment No. 2291, Section 6**

(6) Withdrawal under the ‘supreme interests’ clause.—

(A) Safety and reliability of the U.S. nuclear deterrent; policy.—The United States—

(i) regards continued high confidence in the safety and reliability of its nuclear weapons stockpile as a matter affecting the supreme interests of the United States; and

(ii) will regard any events calling that confidence into question as “extraordinary events related to the subject matter of the Treaty” under Article IX(2) of the Treaty.

(B) Certification by secretary of defense and secretary of energy.—Not later than December 31 of each year, the Secretary of Defense and the Secretary of Energy, after receiving the advice of—

(i) the Nuclear Weapons Council (comprised of representatives of the Department of Defense, the Joint Chiefs of Staff, and the Department of Energy),

---

<sup>41</sup> Senator Joseph Biden, *Congressional Record—Senate*, October 8, 1999, S12296.

<sup>42</sup> Senator Arlen Specter, *Congressional Record—Senate*, October 8, 1999, S12267.

<sup>43</sup> Senator Joseph Biden, *Congressional Record—Senate*, October 8, 1999, S12268.

(ii) the Directors of the nuclear weapons laboratories of the Department of Energy, and

(iii) the Commander of the United States Strategic Command, shall certify to the President whether the United States nuclear weapons stockpile and all critical elements thereof are, to a high degree of confidence, safe and reliable. Such certification shall be forwarded by the President to Congress not later than 30 days after submission to the President.

(C) Recommendation whether to resume nuclear testing.—If, in any calendar year, the Secretary of Defense and the Secretary of Energy cannot make the certification required by subparagraph (B), then the Secretaries shall recommend to the President whether, in their opinion (with the advice of the Nuclear Weapons Council, the Directors of the nuclear weapons laboratories of the Department of Energy, and the Commander of the United States Strategic Command), nuclear testing is necessary to assure, with a high degree of confidence, the safety and reliability of the United States nuclear weapons stockpile.

(D) Written certification; minority views.—In making the certification under subparagraph (B) and the recommendations under subparagraph (C), the Secretaries shall state the reasons for their conclusions, and the views of the Nuclear Weapons Council, the Directors of the nuclear weapons laboratories of the Department of Energy, and the Commander of the United States Strategic Command, and shall provide any minority views.

(E) Withdrawal from the treaty.—If the President determines that nuclear testing is necessary to assure, with a high degree of confidence, the safety and reliability of the United States nuclear weapons stockpile, the President shall consult promptly with the Senate and withdraw from the Treaty pursuant to Article IX(2) of the Treaty in order to conduct whatever testing might be required.<sup>44</sup>

Emphasis was given to the point that this amendment would provide a stronger safeguard than the language originally proposed by the President:

Mr. KENNEDY. If the Senator will yield on that question, so the amendment makes a change to the safeguards and makes this a mandatory requirement on the President to exercise the Supreme National Interest if the stockpile cannot be certified?

Mr. BIDEN. Yes.

---

<sup>44</sup> Senator Joseph Biden (for Senator Tom Daschle, Daschle Executive Amendment No. 2291, *Congressional Record—Senate*, October 12, 1999, S12427.



Mr. KENNEDY. And, that is the measure that is going to be advanced by the leadership, yourself included, to be a part of the Resolution of Ratification?

Mr. BIDEN. That is correct. By the way, it is much stronger than any President wants. It is section (E) of the amendment we sent. I will read it to the Senator:

Withdrawal from Treaty: If the President determines that nuclear testing is necessary—

The antecedent to that is the lab Directors say it—to assure, with a high degree of confidence, the safety and reliability of the United States nuclear weapons stockpile, the President shall consult promptly with the Senate and withdraw from the Treaty pursuant to Article IX (2) of the Treaty in order to conduct whatever testing might be required. It is pretty strong.<sup>45</sup>

[Senator Biden] ...Let me read the exact language. It says this under E, page 5 of the amendment:

*Withdrawal from the treaty.* “If the President determines”—and I just explained how he determines—if it is sent to him by the lab Directors and the Secretaries of Energy and Defense who say we can't certify—“that nuclear testing is necessary to assure with a high degree of confidence the safety and reliability of the United States nuclear weapons stockpile, the President shall consult promptly with the Senate and withdraw from the treaty pursuant to Article IX.” He doesn't have a choice. He has to withdraw. That is the ultimate safeguard.<sup>46</sup>

## Views of Treaty Opponents

### Limits of Safeguard F Commitment

[Senator Lott] In essence, the lab directors rendered their technical judgment on entering into the Comprehensive Test Ban Treaty based upon a political commitment. But the fact is that Safeguard F isn't even a commitment; it doesn't say the United States will resume testing if the lab directors can't certify a high level of confidence in the safety or reliability of a weapon in our nuclear stockpile. It doesn't say the “supreme national

---

<sup>45</sup> Senator Edward Kennedy and Senator Joseph Biden, *Congressional Record – Senate*, October 12, 1999, S12356.

<sup>46</sup> Senator Joseph Biden, *Congressional Record – Senate*, October 12, 1999, S12362-12363.

interest" clause will be invoked to resume testing if a problem is found which requires testing. Rather, it says that several different levels of interested parties all have to agree that there is a problem, and that they have to agree that the problem is in a weapon that the United States can't do without. So this opens the door for responding to a problem in our nuclear stockpile by deciding to eliminate from our stockpile entire types of our nuclear weapons. Removing weapons types with problems is a convenient way, after all, of eliminating problems from the stockpile. But it ignores the fact that we have these weapons in the stockpile because we need them.

Furthermore, Safeguard F is of little, if any, value because it doesn't commit to resume testing even if a problem is found in a weapon that it is determined the United States cannot do without. Safeguard F only makes this commitment: "The President, in consultation with Congress, would be prepared to withdraw from the CTBT under the standard 'supreme national interests' clause in order to conduct whatever testing might be required."

To my knowledge, the United States has never made use of this clause in any treaty. But more importantly, we must recognize that neither the lab directors nor the United States Senate has received a commitment under this safeguard that testing will be resume if necessary. The only commitment here is that the President will consult with Congress and be prepared to leave the treaty to test. This safeguard should reassure no one.<sup>47</sup>

[Senator Inhofe] Some people have said, well, in the worst-case scenario, if something happens to the safety of this thing, we have a way of getting out of this thing. It is called safeguard F. Safeguard F is one sentence in the treaty. That sentence says that there is a way out in the event that it becomes a supreme national interest to get out. So that would be interpreted by our Commander in Chief or President, whoever is President at that time. I have often said—I don't think anyone is going to refute it—that we have a President who has a very difficult time telling the truth. Let us assume he is telling the truth. This is what he said his interpretation would be in his application of safeguard F:

In the event that I were informed by the Secretary of Defense, the Secretary of Energy, advised by the Nuclear Weapons Council, the directors of the Energy Department's nuclear weapons labs and the commander of the U.S. Strategic Command that a high level of confidence in the safety or reliability of a nuclear weapons type, which the two Secretaries consider to be critical to our nuclear

---

<sup>47</sup> Senator Trent Lott, *Congressional Record - Senate*, October 8, 1999, S12292.

deterrent, could no longer be certified, I would be prepared, in consultation with Congress, to exercise the supreme national interest under the CTBT in order to conduct whatever testing might be required.

He is saying, even if these five people; that is, everyone who has anything to do with or any knowledge of these nuclear weapons, even if all of them insist on it, he didn't say he would do it. He said he would be prepared to do it. That is a very weak statement. It doesn't mean he would do it at all. I don't find any comfort at all in what he stated.<sup>48</sup>

[Senator Burns] ...An essential part of the administration's plan to implement the treaty is a "safeguards package." The mere existence of the safeguards package speaks for itself: without them, the treaty poses too many risks. Unfortunately, the treaty we are asked to vote upon contains none of the safeguards because the terms of the treaty expressly preclude making the safeguards package part of the treaty. In other words, the treaty prohibits meaningful reservations. Consequently, we are asked to bet on the come that the administration can deliver all that is promises in the safeguards package, not only in the next few years but far into the future. We are told that the Joint Chiefs of Staff support the treaty with the safeguards and is unable to comment on the merits of the treaty without the safeguards. I fully understand the Chain of Command. Our leaders also understand the Chain of Command. We do not have to read too much between the lines to conclude that without the safeguards package, this treaty poses unacceptable risks to our national security.<sup>49</sup>

### **Political Difficulty of Withdrawing from the Treaty**

[Senator Warner] I say to my good friend—I know other Senators want to speak; it is important, and we are going to have a good debate today—in my opinion, you jeopardize substantially the world community if at any time you say we might pull out pursuant to that clause.<sup>50</sup>

[Senator Hagel] What are the consequences of us pulling out of this treaty? I hear from a number of my friends: If it is a bad treaty, we sign it and go ahead, and if the President of the United States says in the supreme national security interests of America we will pull out of the treaty—my goodness, do we think it is that easy to arbitrarily pull out of a treaty we led for over 50 years under the leadership of President Eisenhower, that was further anchored by the actions of President Kennedy with the first

---

<sup>48</sup> Senator James Inhofe, *Congressional Record – Senate*, October 8, 1999, S12272.

<sup>49</sup> Senator Conrad Burns, *Congressional Record – Senate*, October 12, 1999, S12342.

<sup>50</sup> Senator John Warner, *Congressional Record – Senate*, October 8, 1999, S12267.

ban on nuclear testing in 1963? Do we think the political environment would be such that we could just arbitrarily pull out when we wanted? Do we not understand the consequences of that?<sup>51</sup>

[Senator Kyl] The United States will never conclude that the accumulated uncertainties are sufficient to justify our abrogation of the treaty. Anti-nuclear interests, knowing full well that a foreign nuclear test has occurred, will always be able to obscure the evidence or moderate the U.S. response. This is true already, of course, but Treaties reside in a rarefied political and legal atmosphere in the U.S. from which abrogation is never taken lightly.<sup>52</sup>

### **Dialogue Between Senators Warner and Specter Concerning the International Impact of Withdrawing from the Treaty**

MR. WARNER. ...We have letters on both sides pointing out how men and women of good conscience—men and women who have had extensive experience in these fields—are different on this treaty. But the question I put to my good friend relates to the President's letter of transmittal of this treaty on September 22, 1997. I am reading from that document which accompanied the treaty to the Senate. There is a provision in there called "The Safeguards." I recite a sentence of that.

The understanding that if the President of the United States is informed by the Secretary of Defense and the secretary of Energy (DOE)—advised by the Nuclear Weapons Council, the Directors of DOE's nuclear weapons laboratories, and the Commander of the U.S. Strategic Command—that a high level of confidence in the safety or reliability of a nuclear weapon type that the two Secretaries consider to be critical to our nuclear deterrent could no longer be certified, the President, in consultation with the Congress, would be prepared to withdraw from the CTBT under the standard "supreme national interests" clause in order to conduct whatever testing might be required.

Speaking for myself—and I have in the course of the last several days as Chairman of the Armed Services Committee dealt extensively with this entire issue before the Senate today—I have time and time again referred to the fact that it is my conclusion, drawn from talking with a number of these senior military officers who have given their support, and who in years past have given their support, that it is this clause that is the foundation for their opinion of support.

---

<sup>51</sup> Senator Charles Hagel, *Congressional Record—Senate*, October 8, 1999, S12270.

<sup>52</sup> Senator Jon Kyl, *Congressional Record—Senate*, October 13, 1999, S12537.

But I say to my good friend that were we to ratify this treaty, and if it would go into force, then many nations could rely on the act of the United States—as a matter of fact, one of the principal reasons for this treaty is to induce other nations to follow—and then 8, 10, or 15 years down the road we exercise the right under this, what happens to those nations? They are left out there stripped of protection that they could, with their own systems, have developed. And, worse yet, if we were ever compelled to announce to the world that we have concern about the credibility and safety of our nuclear arsenal, that would send a frightening message across the land that what we have had in place these 50 years, referred to as the "nuclear umbrella," which umbrella preserved the peace from major conflict in Europe for 50 years, is now in doubt.

Mr. President, as you talk about who is supporting the treaty, let's go back and examine the reasons. I say that the military relied very heavily on that clause. In my judgment, if that clause were ever utilized, this country would be in a far worse position than if the Senate were to exercise its right and withhold the advice and consent on ratification.

I ask my good friend, if that clause were invoked, what would be the reality among the world's community of nations? What would be the reality of the signal going out that our credible deterrent is in question?

Mr. SPECTER. Mr. President, I am delighted to respond to that question from the distinguished chairman of the Armed Services Committee on a number of levels.

First of all, the clause is there, so that when the Chairman of the Joint Chiefs and others support the treaty because of the presence of that clause, that is a very important factor. And that clause is worth relying upon.

That is the reason, if there should be a problem either with the stability of our stockpile, or with the verification, and we felt it was necessary for national security to invoke that clause and withdraw, that we would do so.

With respect to other nations which might ratify the treaty based on our leadership, they do so with the full knowledge that that clause is present, and that we have the right to withdraw in our supreme national interest, so that if we should exercise the right of this entire affair in our dealings with those nations because they have known from the very outset that is a distinct possibility, there is nothing hidden about that.

When you ask the pointed question at the very end of the series of implicit questions, when you ask the question, how would it look for our national security if we made a concession that we had a test, and withdrew from the treaty, I would say to my distinguished colleague from Virginia that is no worse than if we did not have the treaty and we started to test.

The only reason we would exercise that clause and withdraw from the treaty would be so that we could start to test.

Assume that we don't have the treaty. Assume down the road that we start to test. That is going to be a loud signal, an explosive signal, to the world that we are not satisfied with the status quo when we have to test.

I think that exercising that clause would be no more emphatic or no more of a problem for the United States than not doing so.

But I think when you take a look behind General Shelton, and other Chairmen of the Joint Chiefs—General Shalikashvili, Colin Powell, David Jones, Bill Crowe—only Admiral Vessey, Chairman Vessey, was on the other side.

I think that is a very weighty consideration.

Mr. WARNER. Mr. President, I simply focus your attention on one or more nations, should this treaty be ratified, saying there is no necessity for us to launch our own program because there stands the United States, the leader. And nowhere in the history of the United States have we ever exercised such a clause as this, I say to my good friend. I don't think there is a precedent in our 200-year history of ever pulling out. But, nevertheless, we could be faced with those facts. Otherwise, there would have been no reason to have put that clause in there.

It was a real situation to the President at that time in transmitting the treaty to the Senate that these conditions could arise, and he put that clause in. I dare say it was put in there such as the military uniformed community could lend their support.<sup>53</sup>

### **Limited Practical Value of Safeguard F**

[Senator Kyl] The CTBT will stop the United States from developing and deploying fourth generation nuclear weapons. Further, it will slowly degrade and destroy the nuclear weapons design infrastructure needed to produce new weapons designs. Thus any promise to withdraw from the CTBT in time of need becomes irrelevant; the capabilities we need won't be there. Without these new designs, nuclear weapons will ultimately cease to be a credible option for U.S. decisionmakers in all but a few very specific cases. Denying the United States the nuclear option is the true intent of the CTBT.<sup>54</sup>

---

<sup>53</sup> Senators John Warner and Arlen Specter, *Congressional Record – Senate*, October 8, 1999, S12266-S12267.

<sup>54</sup> Senator Jon Kyl, *Congressional Record – Senate*, October 13, 1999, S12540.

## NATIONAL IGNITION FACILITY

The National Ignition Facility (NIF) is one of the key new technical capabilities being developed to enable the SSP.<sup>55</sup> As such, it relates to the Panel's recommendation that certification involve weapons-related technical capabilities in addition to the weapons themselves. Treaty proponents did not emphasize NIF, the construction of which has encountered problems that have resulted in a DOE initiative to resolve issues.<sup>56</sup> Several Senators who opposed ratification of the CTBT at this time pointed to the NIF to demonstrate that the SSP was not developing the needed technical capabilities on the required schedule.

[Senator Kyl] In fact, the Stockpile Stewardship Program has already experienced setbacks. For example, the National Ignition Facility, which is the linchpin of the program, has recently fallen behind schedule and is over budget. It still faces a critical technical uncertainty about a major goal of its design: will it be able to achieve thermonuclear ignition?<sup>57</sup>

[Senator Lott] I will not go through each part of the Stockpile Stewardship Program, but I will take a moment to discuss the National Ignition Facility, which has been described by senior Department of Energy officials as one of the key elements of Stockpile Stewardship. In fact, a senior Energy Department official has briefed Senate staff that the Stockpile Stewardship Program cannot succeed if the National Ignition Facility does not succeed.

The purpose of the National Ignition Facility, being built by the Lawrence Livermore National Lab, is to achieve a better understanding of the part of the nuclear weapon known as the "primary." The primary is the first and most critical stage in a nuclear explosion, and also happens to be the least understood part of our nuclear weapons. While other problems can affect the reliability of our nuclear weapons, we know that a nonfunctioning or deficient primary means that the weapon will either not work or not work as planned. In either case, this would be a major problem for our nuclear deterrent, and, hence, for our strategy of nuclear deterrence.

---

<sup>55</sup> NIF is one of the cornerstones of the SSP. NIF is intended to house the world's most powerful laser. It is intended to create, for the first time within a laboratory, brief bursts of self-sustaining fusion reactions. NIF will provide the temperatures and pressures needed to conduct experiments to validate weapon-physics computer codes and address important issues of stockpile stewardship. An overview is available in *1998 Annual Report, Lawrence Livermore Laboratory*. <[www.llnl.gov/director/annual-report98](http://www.llnl.gov/director/annual-report98)>

<sup>56</sup> U.S. Department of Energy, "Secretary of Energy Advisory Board Will Review National Ignition Facility, Richardson Appoints Independent Panel of Experts." *U.S. Department of Energy News*, November 10, 1999.

<sup>57</sup> Senator Kyl, *Congressional Record - Senate*, October 8, 1999, S12260.



Senate staff were briefed at length on the National Ignition Facility during a visit to the Livermore Lab last January. During this briefing they were told explicitly that the National Ignition Facility was on schedule for completion in October of 2003 and on budget. This program at that time was estimated to cost \$1.2 billion.

We have recently learned that the National Ignition Facility is not on schedule and budget, contrary to the representations that were made last January to staff. The same representation was made in testimony in March of 1999 to the Senate Armed Services Committee by Dr. C. Bruce Tarter, Director of the Lawrence Livermore Lab, when he stated, "I am pleased to report that NIF [National Ignition Facility] construction is on budget and on schedule." In fact, however, the Washington Post reported on September 6, 1999, that, "Energy Department officials said mismanagement may cause the project's cost to soar as much as \$350 million above the originally projected \$0.2 billion and delay completion by as much as two years." Dr. Tarter's statement demonstrates that each part of the Stockpile Stewardship Program is a complex undertaking, the success of which cannot be assured, whether for reasons of technological or managerial deficiencies.<sup>58</sup>

[Senator Domenici] There is no question that in addition, the validity of this approach remains unproven, and key facilities, such as the National Ignition Facility, are behind schedule and over budget, and it is supposed to be one of the integral parts of the being able to determine the stockpile confidence.<sup>59</sup>

## **SSP FUNDING**

### **Synopsis**

During debates, reference was made to a near-term SSP funding requirement of \$4.5 billion per year for 10 years. Senators opposed to the CTBT expressed doubts concerning the likelihood that SSP would be funded at this level. Some proponents of the treaty were prepared to recognize and respond to this issue, given treaty ratification.

### **Views of Treaty Proponents**

[Senator Biden] Finally, I have real questions about my colleagues' concern that the stockpile stewardship cannot work. Our scientists are the best in the world. They know what they are doing. They define scientific

---

<sup>58</sup> Senator Trent Lott, *Congressional Record – Senate*, October 8, 1999, S12287.

<sup>59</sup> Senator Pete Domenici, *Congressional Record – Senate*, October 8, 1999, S12372.



challenges that must meet the military performance and reliability standards. After defining these challenges, they believe they can meet them. I believe they know what they are talking about. But I see one problem. The one problem the Stockpile Stewardship Program faces now and in the future is that some may not fund it. That is what our colleagues at the laboratories are talking about.<sup>60</sup>

Mr. KENNEDY. What assurances will we have that there will be continued funding for the Stockpile Stewardship Program? I imagine that the Senator agrees, if this is indeed a concern, that we would be glad to make funding for the Stockpile Stewardship Program mandatory. And, I doubt that there would be any hesitancy, on the part of our colleagues, to get broad support for this in the Senate, if that was what was needed so that ensuring funding for this important program wasn't an issue or a question.

Many of the witnesses at the hearings said: "How do we know there will be continued funding? They may very well cut back that program." Is this another area about which the Senator is concerned, that we don't know whether, year-to-year, the funds will be available for the Stockpile Stewardship Program?

Can he give us some insight about his own thinking on how we can give assurances to the lab directors that there will be adequate funding for that program in the future?

Mr. BIDEN. The Senator, as usual, puts his finger on one of the incredible flaws in our opponents' reasoning. They engage in circular reasoning. It goes like this: Without spending money on the Stockpile Stewardship Program, roughly \$4.5 billion a year for 10 years, we will not be able to attain, when the shelf life of these weapons is reached 10 years out or more, a degree of certainty that they are reliable and safe.

You say: OK, we will fund it; we are for it, and the President sends up that number.

Then they say: But we have a problem. Our Republican friends in the House won't vote for that much money, and we had to fight too hard to get it and they probably won't do it next year. The reason why, they go on to say, I am against this, although I think if we funded it, it would work and it would make sense, is my Republican colleagues in the House probably won't fund it; therefore, I can't be for this treaty because you guys are not funding the stockpile.

---

<sup>60</sup> Senator Biden, *Congressional Record - Senate*, October 8, 1999, S12309.

I find that absolutely fascinating, but it is the circular reasoning which is being engaged. It strings together a group of non sequiturs that end up leading to a conclusion that makes no sense.

The Senator has been here longer than I. Can he imagine, if we vote this treaty down and other nations begin to test, and those who voted it down are saying, by doing that, we think the United States should be able to test, can you imagine this or future Congresses coming up with \$45 billion to perfect a Stockpile Stewardship Program which purpose and design is to avoid nuclear testing, to spend \$45 billion for the redundancy? Can the Senator imagine us doing that?

Mr. KENNEDY. I certainly cannot. The Senator has put his finger on one of the many reasons for supporting the Stockpile Stewardship Program which is to give the necessary assurances that funding for maintaining our weapons stockpile will be there year after year. This was something I noted was a concern during the course of our hearings—this question about the need for adequate funding. And, the Senator has responded to that concern. There is broad support, certainly on our side or for those who support this treaty, for giving the assurance that funding would be there. It is just one more of the arguments made by those who oppose this treaty that has now been rebutted. I thank the Senator.

Mr. BIDEN. I thank the Senator for his response. I will raise this when we get to the amendments. I wish to point out there is one other ultimate safeguard. The ultimate safeguard is in the amendment, our last provision, which says, if, in fact, we do not fund the stockpile and that causes the laboratory Directors to say, 'We cannot certify,' and that means the Secretary of Energy says, 'We cannot certify,' the President of the United States, upon that determination, must withdraw from the treaty and allow us to begin to test. I am amazed at the arguments that are being made on the other side.

Mr. KENNEDY. If the Senator will yield on that question, so the amendment makes a change to the safeguards and makes this a mandatory requirement on the President to exercise the Supreme National Interest if the stockpile cannot be certified?

Mr. BIDEN. Yes.

Mr. KENNEDY. And, that is the measure that is going to be advanced by the leadership, yourself included, to be a part of the Resolution of Ratification?

Mr. BIDEN. That is correct. By the way, it is much stronger than any President wants. It is section (E) of the amendment we sent. I will read it to the Senator:

*Withdrawal from Treaty:* If the President determines that nuclear testing is necessary—

The antecedent to that is the lab Directors say it—to assure, with a high degree of confidence, the safety and reliability of the United States nuclear weapons stockpile, the President shall consult promptly with the Senate and withdraw from the Treaty pursuant to Article IX (2) of the Treaty in order to conduct whatever testing might be required.

It is pretty strong.<sup>61</sup>

### **Views of Treaty Opponents**

[Senator Allard] I want to touch on an issue that does not regard the text of the treaty, but the so-called six safeguards. I will not be able to get into detail on all of them, but it seems these safeguards have been discussed as if they were part of the treaty itself. In reality, these safeguards are just promises made by President Clinton. Even if they are contained in the Resolution of Ratification, these safeguards are still subject to congressional and budgetary pressures.

For instance, safeguard A states that the Stockpile Stewardship Program must be able to ensure a high level of confidence in the safety and reliability of nuclear weapons in the active stockpile. My concern is, what if the program runs into budgetary programs and a few Congressmen decide we are spending too much money on the program and attempt to kill the program?

Also, I know there are special interest groups that support the CTBT but oppose the Stockpile Stewardship Program and will put domestic political pressure on all of us to reduce and end the Stockpile Stewardship Program and instead fund other programs.<sup>62</sup>

[Senator Lott] Is Stockpile Stewardship funding sufficient and sustainable? This question is asked because the lab directors originally told the administration they needed \$4.8 billion per year, but were told to design a \$4.5 billion per year program. After doing so they were then told the \$4.5 billion per year would be in current dollars, and would therefore not be adjusted over time for inflation. And most recently, the labs were told that the cost of producing tritium would have to be accommodated within the \$4.5 billion per year, though it was not included by the labs in

---

<sup>61</sup> *Congressional Record – Senate*, October 12, 1999, S12356.

<sup>62</sup> Senator Wayne Allard, *Congressional Record – Senate*, October 8, 1999, S12279-12280.

their \$4.5 billion per year budget. In testimony before the Senate Assistant Secretary of Energy Vic Reis stated, "A production source of tritium would be in addition to" the \$4.5 billion per year for Stockpile Stewardship. Dr. Reis, however, is directly contradicted by the FY 2000 Stockpile Stewardship Plan Executive Overview, which states, "FY '00 funding for the tritium source is included within this level" of \$4.5 billion. Thus, the labs are getting less than they said they needed for the Stockpile Stewardship Program; they're sustaining funding reductions because of inflation; and, their program is being further reduced by having additional requirements levied upon Stockpile Stewardship without the provision of additional resources.<sup>63</sup>

[Senator Domenici] My colleagues all know that I fought very hard to get the money for the Stockpile Stewardship Program. We came perilously close this year to having this part of our budget cut by as much as \$1 billion by the House. I think after weeks of saying we would not go to conference—it is not worth going to conference to fight—it was believed it would be better to stay at last year's level. They finally came to the point where we have a Stockpile Stewardship Program funded, but in an almost irrelevant way.<sup>64</sup>

---

<sup>63</sup> Senator Trent Lott, *Congressional Record—Senate*, October 8, 1999, S12288.

<sup>64</sup> Senator Pete Domenici, *Congressional Record—Senate*, October 12, 1999, S12372.

**Appendix A**  
**CTBT COMMITTEE HEARINGS**

## **Appendix A**

### **CTBT COMMITTEE HEARINGS**

The Senate Foreign Relations Committee, the Senate Committee on Armed Services, and the Senate Select Committee on Intelligence gave consideration to the CTBT in hearings conducted in October 1999.

The analysis of Senators' views concerning nuclear stockpile certification and stewardship in this report is based on the deliberations conducted on the Senate floor, not in committee hearings, which influenced the report only to the extent that Senators referenced the committee hearings.

Key unclassified hearings were held on October 6–7, 1999. The primary witnesses and individuals presenting statements at these hearings were as follows.

#### **Committee on Armed Services, October 6, 1999<sup>1</sup>**

- The Honorable William S. Cohen, Secretary of Defense.
- General Henry H. Shelton, USA, Chairman, Joint Chief of Staff
- The Honorable James R. Schlesinger, Former Secretary of Defense and Secretary of Energy
- General John M. Shalikashvili, USA (Ret.), Former Chairman, Joint Chiefs of Staff

#### **Committee on Armed Service, October 7, 1999**

- The Honorable Bill Richardson, Secretary of Energy
- Dr. C. Paul Robinson, Director, Sandia National Laboratories.
- Dr. C. Bruce Tartar, Director, Lawrence Livermore National Laboratory
- Dr. Robert R. Barker, Former Assistant to the Secretary of Defense (Atomic Energy)

---

<sup>1</sup> Available presentations before the Armed Services Committee can be found at [http://www.senate.gov/~armed\\_services/hearings.htm#oct99](http://www.senate.gov/~armed_services/hearings.htm#oct99).

- Dr. John Foster, Former Director, Lawrence Livermore National Laboratory and Former Director, Defense Research and Engineering
- Dr. Kathleen C. Baily, Former Assistant Director for Nuclear and Weapons Control, Arms Control and Disarmament Agency
- Admiral Henry G. Chiles, Jr, USD (Ret.), Former Commander-in-Chief, United States Strategic Command
- Dr Sidney D. Drell, Professor Emeritus, Stanford Linear Accelerator Center

**Foreign Relations Committee, October 7, 1999**

- The Honorable John W. Warner, Chairman, Committee on Armed Services, United States Senate
- The Honorable Richard C. Shelby, Chairman, Select Committee on Intelligence, United States Senate
- The Honorable Carl Levin, Ranking Minority Member, Committee on Armed Services, United States Senate
- The Honorable J. Robert Kerrey, Vice Chairman, Select Committee on Intelligence
- The Honorable Casper W. Weinberger, Former Secretary of Defense
- The Honorable Jeane J. Kirkpatrick, Former U.S. Permanent Representative to the United Nations
- The Honorable Stephen J. Ledogar, Former Chief Negotiator of the Comprehensive Test Ban Treaty.
- The Honorable Madeleine K. Albright, Secretary of State
- John D. Holum, State Department Senior Adviser for Arms Control
- The Honorable Ronald F. Lehman, Former Director, Arms Control and Disarmament Agency
- Mr. Troy E. Wade, Chairman, Nevada Alliance for Defense, Energy, and Business
- Dr. Richard L. Garwin, Senior Fellow for Science and Technology, Council on Foreign Relations

**Appendix B**  
**EVENTS PRIOR TO THE SENATE'S OCTOBER 13, 1999, VOTE**  
**ON THE COMPREHENSIVE TEST BAN TREATY**



## **Appendix B**

### **EVENTS PRIOR TO THE SENATE'S OCTOBER 13, 1999, VOTE ON THE COMPREHENSIVE TEST BAN TREATY**

#### **NEGOTIATIONS THROUGH U.S. SIGNATURE OF THE CTBT**

The CTBT considered by the Senate in October 1999 began in the Conference on Disarmament (CD). The CD was established in 1979 by the first Special Session on Disarmament of the United Nations General Assembly to serve as the single multilateral disarmament negotiating forum.

Nuclear-weapons-related issues have been on the agenda of the CD since its inception. A predecessor of the CD was the forum in which the Nuclear Nonproliferation Treaty was negotiated.<sup>1</sup> CD negotiations concerning a CTBT commenced in January 1994 and continued through August 1996. While most participants in these negotiations reached agreement concerning a proposed treaty by August 1996, there was not complete agreement. India and Iran made specific objections; the Indian government stated that it did not intend to become a signatory to the treaty, as drafted.<sup>2</sup> Since the CD conducts its work and adopts decisions by consensus, it was not possible for the CD to forward the draft treaty to the United Nations.<sup>3</sup>

---

<sup>1</sup> Conference on Disarmament, *Conference on Disarmament: Overview*. 1999. <[www.unog.ch/frames/disarm/disconf.htm](http://www.unog.ch/frames/disarm/disconf.htm)>; Uranium Institute, *Treaty on the Non-Proliferation of Nuclear Weapons (NPT)*, 1997, <[www.vilondon.org/uilondon/sgnpt.htm](http://www.vilondon.org/uilondon/sgnpt.htm)>. The predecessor in this case was the Eighteen-National Disarmament Committee.

<sup>2</sup> Conference on Disarmament, *Report of the Conference on Disarmament to the General Assembly of the United Nations*, CD/1436, 12 September 1996. India objected largely because the draft treaty (1) permitted non-explosive testing that might result in the qualitative improvement of nuclear weapons; (2) did not provide for a time-bound process of nuclear disarmament, and (3) contained entry-in-force provisions that made India's accession to the CTBT a precondition, notwithstanding the Indian government's statement that it did not intend to sign the treaty. Iran objected largely because (1) there was no provision mandating elimination of all nuclear weapons by a specific date; (2) the draft treaty provided for use of national technical means in verification; and (3) Israel was included as a state within the Middle East and South Asian group (Iran proposed that it be included in the North American and Western European Group).

<sup>3</sup> Conference on Disarmament, *Rules of Procedure of the Conference on Disarmament*, CD/8/Rev.8, 17 August 1999. <[www.unog.ch/frames/disarm/cdproced.htm](http://www.unog.ch/frames/disarm/cdproced.htm)>

However, it was possible for Australia to bring the same treaty text forward to the United Nations General Assembly for consideration as a national proposal.<sup>4</sup> This action was supported by the United States and the other declared nuclear weapons states. Australia introduced its resolution on August 22, 1996. It was adopted by the General Assembly on September 10, 1996 by a vote of 153 to 3 with five abstentions and 19 absentees.<sup>5</sup> President Clinton signed the CTBT on September 22, 1996; he submitted it to the Senate on September 24, 1997. As is customary, this involved transmittal to the Senate and referral to the Senate Foreign Relations Committee.

### **THE PATH TO CONSIDERATION OF THE CTBT BY THE SENATE**

Transmittal of this or any other treaty to the Senate does not immediately result in committee hearings or a vote by the entire Senate. The scheduling of hearings is controlled by committee leadership. On July 22, 1999, all 45 Democratic Senators signed a letter to Senate Foreign Relations Committee Chairman Senator Helms requesting hearings. Among the arguments in this letter were the following statements:

As early as September of this year, the 37 countries that have ratified the CTBT will hold a conference to discuss how to facilitate the Treaty's early entry into force. If the United States is to maintain its leadership role and convince other countries to forego nuclear weapons tests, the full Senate must be given the opportunity to consider ratification of the CTBT before that Conference begins.

Many nations are waiting for the United States to lead on this important issue before completing ratification in their countries. Failure to act on the Treaty will deny the U.S. an active voice at the conference and could severely weaken U.S. non-proliferation efforts, including the effort to bring India and Pakistan into this treaty. The recent hostilities in Kashmir are a sober reminder of the need to do all we can to prevent a nuclear holocaust in that region.

The United States must not relinquish its leadership in the nuclear non-proliferation arena. We respectfully urge you to hold all necessary

---

<sup>4</sup> United Nations, Comprehensive Nuclear-Test-Ban Treaty (CTBT) Brief Background. <[www.un.org/Depts/dda/WMD/CTBTFrame1Source1.htm](http://www.un.org/Depts/dda/WMD/CTBTFrame1Source1.htm)>

<sup>5</sup> United Nations General Assembly, A/RES/50/245, 17 September 1996, Fiftieth Session, Agenda item 65. India, Libya, and Bhutan voted against the resolution; Cuba, Lebanon, Mauritius, Syria, and Tanzania abstained.

hearings and to report the Comprehensive Test Ban Treaty to the Senate for timely consideration before the CTBT inaugural conference.<sup>6</sup>

Senator Helms' response linked the CTBT to Senate consideration of other treaties:

I note your distress at my floccinaucinihilipilification of the CTBT. I do not share your enthusiasm for this treaty for a variety of reasons, and I must point out that it has been 801 days since President Clinton agreed to legally-binding language requiring that he submit to the Senate amendments to the ABM Treaty for its advice and consent. The continued adherence by the U.S. to the legally-defunct ABM Treaty is a perilous obstacle to the United States' building and deploying a missile defense to protect the American people from a nuclear holocaust. Yet, the Administration continues to hold the ABM Treaty hostage, refusing to allow the Senate to vote on it.

Further, on November 12, 1998, the Administration signed the Kyoto Protocol to the UN Convention on Global Climate Change. Despite my repeated requests, and those of other Senators, the President has refused to submit that treaty to the Senate for its advice and consent.

I presume the pattern here is clear—which is why I have made clear to the Administration that the CTBT is in line for Committee consideration behind the ABM and Kyoto treaties which the Administration is holding hostage.

Inasmuch as you are clearly concerned about the need for swift Senate action on treaties, perhaps I can enlist your support in respectfully suggesting that you write to the President urging that he submit the ABM Protocols and the Kyoto Protocol to the Senate? I will be very interested in any response you receive from him.<sup>7</sup>

In September 1999, the Senate Democratic and Republic leaderships negotiated concerning options for consideration of the CTBT. These resulted in an agreement reached using the Senate's unanimous consent procedures.

---

<sup>6</sup> Letter from all 45 Democratic Senators to Senator Jesse Helms, Chair, Foreign Relations Committee, Calling for Hearings on the Comprehensive Test Ban Treaty, July 20, 1999. <[www.clw.org/coalition/ctbtindex.htm](http://www.clw.org/coalition/ctbtindex.htm)>

<sup>7</sup> Senator Jesse Helms, Letter to Senator Byron L. Dorgan, July 26, 1999. [www.clw.org/coalition/ctbtindex.htm](http://www.clw.org/coalition/ctbtindex.htm). The use of "floccinaucinihilipilification" attracted attention in the media when this letter was publicized. The *Compact Oxford English Dictionary* (2<sup>nd</sup> edition, 1991, p. 607) defines this as "(humorous) word signifying 'at a small price' or 'at nothing.' Enumerated in a well-known rule of the Eton Latin Grammar. The action or habit as estimating as worthless."

To understanding subsequent Senate deliberations concerning procedures and the possible deferral of the Senate CTBT ratification vote, it is important to note that, while procedures were agreed, there continued to be significant disagreements between treaty proponents and opponents concerning the procedures to be employed for consideration of the CTBT. Proponents argued that, while the treaty needed to be considered, more preliminary committee hearings were warranted. Opponents argued that the issues had been sufficiently developed in committee hearings and through other means and that the time allocated was sufficient. Some of the key differences were evident at the outset of the Senate's consideration of the treaty, when procedures were agreed:

Mr. LOTT. Mr. President, as in executive session, I ask unanimous consent that at 9:30 a.m. on Wednesday, October 6, the Foreign Relations Committee be discharged from further consideration of Treaty Document 105-28 and the document be placed on the Executive Calendar, if not previously reported by the committee.

I should note, that is something that was requested by the Democratic leadership, and we think it is a reasonable request.

I further ask consent that at 9:30 a.m. on Friday, October 8, the Senate begin consideration of Treaty Document 105-28 and the treaty be advanced through the various parliamentary stages, up to and including the presentation of the resolution of ratification, and there be one relevant amendment in order to the resolution of ratification to be offered by each leader.

There was a request for additional time for that debate. Therefore, I ask consent that there be a total of 14 hours of debate on the treaty itself, to be equally divided in the usual form, and no other amendments, reservations, conditions, declarations, statements, understandings, or motions be in order, and that amendments be filed at the desk 24 hours before they are called up.

I think it is fair. If we are going to have an amendment on our side and the other side, we need some notification of its content.

There was a thought we might need additional time for discussion on those amendments. Therefore, I ask there be a time limitation of 4 hours equally divided on each amendment, in addition to the 14 hours, for a total of 18 hours over a 2-day period, but spread over a period of time that I believe will run about 6 days.

I further ask consent that following the use or yielding back of time and disposition of the amendments, the Senate proceed to vote on the

adoption of the resolution of ratification, as amended, if amended, all without any intervening action or date.

The PRESIDING OFFICER. Is there objection?

The minority leader.

Mr. DASCHLE. Reserving the right to object, and I will not object, I think this unanimous consent request represents progress from the first request made by the majority leader. But I still believe this procedure is unfair, and I would even say dangerous.

This is the most significant treaty with which we will deal on nuclear proliferation maybe in the time that the majority leader and I will be leaders. We are going to be taking this up on the Senate floor without one hearing in the Foreign Relations Committee. We have looked back. We do not know when that has ever happened before, when the Foreign Relations Committee has not acted upon a treaty, even though it has been pending for 2 years.

We are hoping that the Committee on Armed Services will take up the treaty next week, but I believe that alone is irresponsible. But we believe we have no choice. Our choice is to send the message as an institution that this treaty is not important, it does not even deserve a hearing, or to send the message, God forbid, that the Senate would reject this treaty and say it was not the U.S. intention to send the message around the world that we will ban nuclear weapons testing. Those are the options on the negative side.

On the positive side, the option might be between now and October 12, we can convince the necessary two-thirds of the Senate to support this treaty. We still hope, we believe, that might be within our reach. But I know what some of the debate will be, and the Presiding Officer or the majority leader will mark my words. We will hear somebody say this treaty is not verifiable, in spite of the fact that expert after expert has noted that it is verifiable, but there will have been no hearings to verify the fact that, indeed, this treaty is subject to all the verification elements required of a treaty of this kind.

We are going to hear all kinds of complaints and all kinds of allegations and rumors about what this treaty does or does not do, and when you do not have hearings, that is what is going to happen.

So we are extremely disappointed with the way this has been handled. As I said, I believe it is irresponsible and dangerous. But we also note this may be the best we can get, and if it is the best we can get, as

troubled as we are, we will take it. We will have our day in court. We will make our best arguments. We will let the judgment of this Senate prevail.

I am very hopeful the administration will be engaged. I am very hopeful those who care as deeply as we care about this issue will join us in making the arguments and in dealing with the issue. I also say it is my intention, as Democratic leader, to conduct hearings of my own as part of the Democratic Policy Committee to ensure that we do have experts in Washington to express themselves. We will do that at the appropriate moment.

I do not object, but I must express very grave reservations.

Mr. LOTT. Has the Chair ruled?

The PRESIDING OFFICER (Mr. Roberts). Is there objection to the leader's request?

Without objection, it is so ordered.<sup>8</sup>

Notwithstanding the reservations expressed by Senator Tom Daschle and subsequently by other treaty proponents, this unanimous consent agreement defined the parameters for Senate consideration of the CTBT.<sup>9</sup> Unanimous consent would have been required to defer the vote and thereby allow more time for committee hearings, and it was clear that such unanimous consent could not easily be obtained.<sup>10</sup>

## **EFFORTS TO DEFER CONSIDERATION OF THE TREATY**

When Democratic members and others requested that the CTBT be considered by the Senate, they appear to have assumed that the treaty would be ratified by two-thirds of the Senate. Shortly after the unanimous consent agreement was reached, it became increasingly apparent that the CTBT would not easily be ratified. In both public

---

<sup>8</sup> "Unanimous Consent Agreement – Comprehensive Test Ban Treaty" *Congressional Record – Senate*, October 1, 1999, S11820. On the first day of deliberations, Senator Joseph Biden, who was the leading treaty proponent, expressed his regrets concerning the by-then unalterable process:

"In retrospect, in hindsight, should some of us have objected to the unanimous consent agreement? The answer is yes. Yes." *Congressional Record – Senate*, October 8, 1999, S12293.

<sup>9</sup> Only Senator Robert Byrd indicated that, had circumstances permitted, he would have objected to the unanimous consent agreement, in which event the Senate would not have considered the CTBT on 8–13 October and voted on the 13<sup>th</sup>, *Congressional Record – Senate*, October 8, 1999, S12271.

<sup>10</sup> For example, Senator Daniel Inhofe announced that he would object to a motion to vitiate the unanimous consent agreement reached on October 1, *Congressional Record – Senate*, October 8, 1999, S12271.

statements and in interactions with Senators, the President attempted to convince the Senate to defer consideration of the treaty. Key interactions occurred during a dinner meeting with Senators that occurred on October 5<sup>th</sup>. Senators Specter (who voted for the treaty) commented on the comments made by the President during the dinner:

Mr. SPECTER. To repeat my last thought, which might have been lost in the UC request, the failure of the United States, up to date, to ratify the Comprehensive Test-Ban Treaty has caused a ripple of wonderment. A vote by the Senate rejecting the Comprehensive Test-Ban Treaty would cause a tidal wave of astonishment. It might set off a chain reaction around the world, which would be even more serious than the chain reaction of the atomic bombs in Nagasaki and Hiroshima.

When we take a look at what is scheduled for next Tuesday, where we have the vote, it is my hope that we will find a way yet to work our way out of the unanimous consent request. I believe that a vote of rejection on Tuesday—and I have used this word before, and I use it advisedly, but I think it is accurate—I think rejecting the treaty would be catastrophic.

We are in a situation where our distinguished majority leader, Senator Lott, is unwilling to defer the vote if he is going to have to face a crescendo of demands during next year. Senator Lott did not want to schedule the Comprehensive Test-Ban Treaty vote at this time. I know because I had asked him to do so. I had asked him to do so in private conversations. When he had given me his reasons, I awaited his judgment. There was substantial urging, maybe even agitation, maybe even goading on the Senate floor by some that Senator Lott should schedule this vote. He finally responded to it. He responded to it in a context where the treaty is assured to be defeated.

President Clinton held a dinner last Tuesday evening, which was attended by a number of people here, including Senators Warner, Biden, Hagel, myself, and others. I think it is fair to comment, as it has been in the media.

The President declined to ask that the vote be deferred on the condition that the President not ask that it be taken up all during the year 2000. I think the President felt that would signify backing off, and he thought some events might develop where he had to call for the treaty to be ratified. He said, candidly, he would have a hard time explaining it to our allies.

Well, I can understand Senator Lott not wanting to see this matter become a political football in the year 2000. It has that potential, whether the parties intend it or not. If there is a crescendo of demand for the treaty



to be ratified, taken up in the spring, fall, or summer of next year, it could have an affect on the election in 2000. I think it is realistic to take it out of the election.

Senator Levin, the distinguished ranking member of Armed Services, made a public comment in the hearings that he thought the treaty should not come up for ratification before the election. I think that is a sound judgment. There may be a way out of that dilemma by scheduling the treaty debate and vote on November 15 of the year 2000. That will take it out of the election cycle and it would allow President Clinton, who has advocated the treaty, to be a spokesman and have it decided on his watch.

There is another alternative, which is not as good as doing it in November of 2000, but that would be to schedule the debate and vote between January 3 and January 20 of 2001. We would not have a lame duck Senate, and it would be out of the election cycle.

I think it is very important to take this treaty out of politics and out of partisanship. There is an overhang that we should not ignore—a partisan overhang to this debate. All 45 Democrats are said to be in favor of the treaty. The number of Republicans is unknown precisely, but very, very limited. That is bad for America and that is bad for the world. When we had the vote on the use of force in the Gulf in January of 1991, it was largely partisan, where 42 Republicans and only 10 Democrats backed a Republican President. When we had a vote on the use of airstrikes in Yugoslavia earlier this year, it was 58 to 41. Only 17 of 55 Republicans joined the Democrats. That partisanship is highly undesirable.<sup>11</sup>

As interpreted by Senator Arlen Specter, the key point was that the President refused to request that the CTBT be deferred until after 2000, which, in Senator Lott's mind, left open the possibility that there might be CTBT-related issues raised in the 2000 Federal elections.

A possible request from the President that consideration of the CTBT be deferred was also addressed on the Senate floor when consideration was given to press accounts of the President's statements on this subject. The President's remarks were addressed by Senator Biden (a treaty proponent) and Senator Warner (who voted against the CTBT and was the lead with Senator Moynihan for a bipartisan effort to arrange for deferral):

Mr. BIDEN. Will the Senator yield? Is he speaking on his own time?

---

<sup>11</sup> Senator Specter, *Congressional Record – Senate*, October 8, 1999, S12266.



Mr. WARNER. Absolutely. Do not worry about small matters. Worry about what I am about to tell my dear friend.

We are all making the best of efforts. I am listening to Senator Byrd, in a very clear and precise way, an evenhanded way, state his case. Then I am handed the President's speech in Ottawa.

A Reuters report states:

It is clear now that the level of opposition to the treaty and the time it would take to craft the necessary safeguard to get the necessary votes are simply not there. So I hope the Senate will reach an agreement to delay that vote.

That expresses our common purpose.

All I have called upon the President to do is to share the burden the leaders would bear should this decision go forward.

I turn the page. Again, quoting:

Establish an orderly process, a nonpolitical orderly process to systematically deal with all the issues that are out there and take whatever time is necessary to do it.

As I told the press a few minutes ago, the President, each day, is taking a step in realization of what has to be done. His National Security Adviser is quoted this morning saying the President asked the vote be delayed. The day before, the Secretary of State said for another day this treaty should be decided by the Senate.

I say to my good friend, Senator Byrd, the last quote of the President: "The whole thing is about politics."

Is everything you are saying today about politics?

Mr. BIDEN. Will the Senator read the whole letter?

Mr. WARNER. I am reading a press report.

Mr. BIDEN. If the Senator will yield, the remainder of that comment was:

...and to systematically deal with all the issues that are out there and to take whatever time is necessary to do it. With this treaty other nations will find it hard to acquire and to modernize nuclear weapons and we will gain the means to detect and deter. If we don't have the treaty for the United States, we will

continue to refrain from testing and giving a green light to every other country in the world to develop and modernize nuclear weapons. I think it is clear what we ought to do but it is also clear we ought not rush to this vote until there has been an appropriate process in the Senate.

Mr. WARNER. Put it in context; is the Senator reading from the Ottawa speech?

Mr. BIDEN. I am reading from the President's statement on CTBT, October 8, 1999, in Ottawa as reported, a copy of which was made and given to me.

Mr. WARNER. I add to it this phrase in which he concluded: "The whole thing is about politics."

I have been here since 9 o'clock this morning, and the Senator has been here the same period; we are working throughout the day. We will be the last Senators to leave this floor tonight and return on Tuesday.

This is not about politics. This is about trying to help our colleagues reach a correct decision on the security interests of this country, I say to Senator Byrd....

Mr. BIDEN. He was at the same dinner as I was with the President of the United States when two present colleagues said: "Mr. President, I'm sad to say the political process has taken this over. This is about politics."

The truth of the matter is, politics is implicated in this. No one is suggesting the politics is good or bad on either side, that one side is better than the other. But two of our Republican colleagues at that dinner—the Senator heard them—said the same thing the President said.

We are acknowledging reality. We can all pretend here, with all the niceties, that politics has no part in this. Let's be real simple: The honest-to-God truth is, this is similar to the guy who says the emperor has no clothes on who usually gets shot after he acknowledges that.

Mr. WARNER. I say to my colleague from Delaware, I will not comment on the comments made at the dinner. I was there, but I think what was said there was confidential. I have always, as a policy when dealing with Presidents, not commented.

I am not criticizing the Senator.

I ask unanimous consent to have printed remarks by President Clinton from October 8, 1999.

There being no objection, the material was ordered to be printed in the Record, as follows:

So they want me to give them a letter to cover the political decision they have made that does severe damage to the interest of the United States and the interest of nonproliferation in the world? I don't think so. That's not what this is about. They have to take responsibility for whether they want to reverse 50 years of American leadership in nonproliferation that the Republicans have been just as involved in as the Democrats, to their everlasting credit.

Now, they have to make that decision. I cannot bring this treaty up again unless they want to. I have asked them to put it off because we don't have the votes. I have talked to enough Republicans to know that some of them have honest, genuine reservations about this treaty, and they ought to have the opportunity to have them resolved, instead of being told that they owe it to their party to vote against the treaty and that the leadership of their party will do everything they can to keep us from writing safeguards into the treaty which answer their reservations, which is what we do on every other thing.

So I don't want to get into making this political. But they shouldn't tie the Senate up or themselves up in knots thinking that some letter from me will somehow obscure from the American people next year the reality that they have run the risk of putting America on the wrong side of the proliferation issue for the first time in 50 years. And they want to do it and then they don't want to get up and defend it before the American people in an election year. That's what this whole thing is about. That is the wrong thing to do.

We don't have the votes. I'm not going to try to bring it up without the votes. Let them take it down, but also agree on a legitimate process to take this out of politics. I will not criticize them as long as they are genuinely working through the issues, the way we did in the Chemical Weapons Treaty.”<sup>12</sup>

In his October 14 press conference, President Clinton commented on negotiations within the Senate, stating that “the night before the vote, Senator Lott and Senate Daschle did, in fact, reach an agreement to put it off. And Senator Lott apparently was unable to convince enough of his caucus to honor the agreement he had made, so he had to

---

<sup>12</sup> *Congressional Record – Senate*, October 8, 1999, S12303-S12304.

withdraw it.”<sup>13</sup> The implication is that it was not possible to convince all of the Senators, as required to overturn the unanimous consent agreement previously agreed.

Senators Warner and Moynihan led an effort to have consideration of the treaty deferred until the next Congress. A letter signed by a majority of the Senate (FigureB-1) was submitted to the Senate’s majority and minority leaders. Th Senate continued to consider the treaty, however, using the procedures that had been unanimously agreed.<sup>14</sup>

The Senate operates using multiple types of sessions. Treaties are considered in executive session. The final potential opportunity to postpone consideration of the CTBT was a vote on the morning of October 13 to move to executive session in order to resume consideration of the treaty. The result was a 55 to 45 vote on party lines to resume the executive session for this purpose.<sup>15</sup>

---

<sup>13</sup> President William J. Clinton, *Press Conference by the President*, October 14, 1999. <[www.whitehouse.gov/WH/New/html/19991014.html](http://www.whitehouse.gov/WH/New/html/19991014.html)>

<sup>14</sup> Twenty (of 51) Senators that voted against the CTBT in October 1999 (plus the one member who answered present) were among the signatories recommending that action be deferred.

<sup>15</sup> *Congressional Record – Senate*, October 13, 1999, S12504-12505.

**Figure B-1. Warner-Moynihan Letter to Majority and Minority Leaders,  
October 12, 1999**

U.S. Senate,  
Washington, DC, October 12, 1999.

Hon. Trent Lott  
*Majority Leader.*

Hon. Tom Daschle  
*Democratic Leader.*

*U.S. Senate, Washington, DC.*

DEAR MR. LEADERS: The Senate Leadership has received a letter from President Clinton requesting 'that you postpone consideration of the Comprehensive Test Ban Treaty on the Senate Floor.' We write in support of putting off final consideration until the next Congress.

Were the Treaty to be voted on today, Senator Warner and Senator Lugar would be opposed. Senator Moynihan and Senator Biden would be in support. But we all agree on seeking a delay. We believe many colleagues are of a like view, irrespective of how they would vote at this point.

We recognize that the Nation's best interests, the Nation's vital business, is and must always be the first concern of the Presidency and the Congress.

But we cannot foresee at this time an international crisis of the magnitude, that would persuade the Senate to revisit a decision made now to put off a final consideration of the Treaty until the 107th Congress.

However, we recognize that throughout history the Senate has had the power, the duty to reconsider prior decisions.

Therefore, if Leadership takes under consideration a joint initiative to implement the President's request—and our request—for a delay, then we commit our support for our Leaders taking this statesmanlike initiative.

#### REPUBLICANS

Warner, Lugar, Roth, Domenici, Hagel, Gordon Smith, Collins, McCain, Snowe, Sessions, Stevens, Chafee, Brownback, Bennett, Jeffords, Grassley, DeWine, Specter, Hatch, Voinovich, Gorton, Burns, Gregg, Santorum.

#### DEMOCRATS

Moynihan, Biden, Lieberman, Levin, Feingold, Kohl, Boxer, Cleland, Dodd, Wyden, Rockefeller, Bingaman, Inouye, Baucus, Hollings, Kennedy, Harry Reid, Robb, Jack Reed.

Mikulski, Torricelli, Feinstein, Schumer, Breaux, Bob Kerrey, Evan Bayh, John Kerry, Landrieu, Murray, Tim Johnson, Byrd, Lautenberg, Harkin, Durbin, Leahy, Wellstone, Akaka, Edwards.

Source: *Congressional Record — Senate*, October 13, 1999. S12548-S12549

**Appendix C**  
**SENATE 1812**

**Appendix C**  
**SENATE 1812**

106th CONGRESS

1st Session

S. 1812

To establish a commission on a nuclear testing treaty, and for other purposes.

IN THE SENATE OF THE UNITED STATES

October 27, 1999

Mr. WARNER introduced the following bill, which was read twice and referred to the Committee on Foreign Relations.

**A BILL**

To establish a commission on a nuclear testing treaty, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

**SECTION 1. ESTABLISHMENT OF PRESIDENTIAL AND SENATORIAL COMMISSION ON A NUCLEAR TESTING TREATY.**

There is established a commission to be known as the Presidential and Senatorial Commission on a Nuclear Testing Treaty (in this Act referred to as the 'Commission').

**SEC. 2. COMPOSITION AND QUALIFICATIONS.**

(a) MEMBERSHIP- (1) The Commission shall be composed of 12 members, as follows:

(A) Six members shall be appointed by the Majority Leader of the Senate.

(B) Six members shall be appointed by the Minority Leader of the Senate.

(2) Of the members of the Commission appointed under each of subparagraphs (A) and (B) of paragraph (1)—

(A) not more than two members may be current employees of the Executive Branch; and

(B) the Legislative Branch shall be represented solely by not more than two Senators.

(3) The members of the Commission shall be persons of demonstrated ability and accomplishment in government who have a substantial background in national security matters.

(4) Each member of the Commission shall take the oath of office prescribed by section 3331 of title 5, United States Code.

(b) CO-CHAIRPERSONS- (1) Subject to paragraph (2), two members of the Commission shall be designated as Co-Chairpersons of the Commission, and each shall have co-equal authority as Co-Chairperson of the Commission.

(2)(A) The President shall designate one of the members of the Commission appointed by the Minority Leader of the Senate to serve as a Co-Chairperson of the Commission.

(B) The Majority Leader of the Senate shall designate one of the members of the Commission appointed by the Majority Leader to serve as a Co-Chairperson of the Commission.

(C) No individual designated as Co-Chairperson of the Commission may hold public office as of the time of designation as Co-Chairperson, nor may any individual accept or hold any other public office or position during such individual's service as Co-Chairperson.

(c) PERIOD OF APPOINTMENT; VACANCIES- Members shall be appointed for the duration of the Commission. Any vacancy in the Commission shall not affect its powers but shall be filled in the same manner as the original appointment.

(d) DEADLINE FOR APPOINTMENTS- The appointments required by subsection (a) shall be made not later than 45 days after the date of the enactment of this Act.



(e) MEETINGS- (1) The Commission shall meet at the call of the Co-Chairpersons of the Commission.

(2) The Commission shall hold its first meeting not later than 30 days after the deadline for appointments to the Commission under subsection (d).

(f) QUORUM- Six members of the Commission voting and present shall constitute a quorum, but a lesser number of members present may hold hearings, take testimony, or otherwise receive evidence.

(g) SECURITY CLEARANCES- Appropriate security clearances shall be required for members of the Commission who are private United States citizens. Such clearances shall be processed and completed on an expedited basis by appropriate elements of the Executive Branch of Government and shall, in any case, be completed within 90 days of the date such members are appointed.

(h) APPLICATION OF CERTAIN PROVISIONS OF LAW- (1) In light of the extraordinary and sensitive nature of its deliberations, the provisions of the Federal Advisory Committee Act (5 U.S.C. App.), and the regulations prescribed by the Administrator of General Services pursuant to that Act, shall not apply to the Commission.

(2) The provisions of section 552 of title 5, United States Code (commonly known as the 'Freedom of Information Act'), shall not apply to the Commission. However, records of the Commission shall be subject to the Federal Records Act and, when transferred to the National Archives and Records Agency, shall no longer be exempt from the provisions of such section 552.

### SEC. 3. DUTIES OF THE COMMISSION.

(a) IN GENERAL- It shall be the duty of the Commission—

(1) to determine under what circumstances a nuclear testing treaty would be in the national security interests of the United States;

(2) to determine how a nuclear testing treaty would relate to the security interests of other nations;

(3) to determine provisions essential to a nuclear testing treaty such that the treaty would be in the national security interests of the United States;

(4) to determine whether a nuclear testing treaty would achieve the non-proliferation and arms control objectives of the United States; and

(5) to prepare and transmit the report described in section 4(c).

(b) IMPLEMENTATION- In carrying out subsection (a), the Commission shall specifically assess any issues the Commission considers appropriate, including the following:

(1) The improvements required for both the United States and the international monitoring systems in order to enhance detection of nuclear tests to meet the requirements of any treaty that may be recommended by the Commission.

(2) The elements of a verification regime that would be required in a nuclear testing treaty in order to minimize any detrimental impact of such treaty to the national security interests of the United States.

(3) The current status of the science-based stockpile stewardship program of the Department of Energy, including—

(A) the date by which the program is anticipated to be fully implemented and proven as a substitute approach for underground nuclear testing; and

(B) the dates of important milestones in the development of the program.

(4) The capability of the stockpile stewardship program to assure the safety, reliability, and military viability of the United States nuclear weapons stockpile indefinitely, including the capability of the program—

(A) to remanufacture, certify, and replace each component in the enduring stockpile;

(B) to add all available, modern nuclear safety and use control devices to weapons in the enduring stockpile; and

(C) to modify existing nuclear weapons or design new weapons to meet future military threats.

(5) The criteria that would be utilized by appropriate officials of the United States (including the Secretary of Defense, the Secretary of Energy, the directors of the Department of Energy national laboratories, and the Commander-in-Chief of the United States Strategic Command) to determine when and if the United States should withdraw

from a nuclear testing treaty under a supreme national interest clause of such treaty in order to resume another method of nuclear weapons tests, including underground tests.

(6) Whether a nuclear testing treaty will disadvantage the United States with respect to the nuclear weapons maintenance and modernization programs carried out by other nations.

(7) Whether a nuclear testing treaty that requires a zero yield is in the national security interests of the United States.

(8) Whether a nuclear testing treaty of permanent duration is in the national security interests of the United States, or whether a treaty with periodic and mandatory reviews of the continuation of such treaty in force is preferable.

(9) The capacity of a nuclear testing treaty to prevent, deter, or lessen the proliferation of crude, or first generation, nuclear weapons.

(10) In the event a nuclear testing treaty receives the advice and consent to ratification of the Senate, the extent to which the actual or perceived decline in confidence in the United States nuclear deterrent would affect the national security of the

United States and the security of our allies.

(11) Whether the elimination of the United States nuclear capability would be in the national security interests of the United States, both currently and in the future.

#### SEC. 4. REPORTS.

(a) INITIAL REPORT- Not later than two months after the first meeting of the Commission, the Co-Chairpersons of the Commission shall, on behalf of the Commission, submit to the Senate a report setting forth a plan for the work of the Commission.

(b) INTERIM REPORTS- Before the submission of the report required by subsection (c), the Commission may issue such interim reports as it finds necessary and desirable.

(c) FINAL REPORT- (1) Not later than March 1, 2001, the Commission shall submit to the President and the Senate a report setting forth the activities, findings, and recommendations of the Commission.

(2) The report under paragraph (1) shall be in unclassified form, but may contain a classified annex.

## SEC. 5. POWERS.

(a) HEARINGS; SUBPOENAS- (1) The Commission or, at its direction, any panel or member of the Commission, may, for the purpose of carrying out the provisions of this Act, hold hearings, sit and act at times and places, require, by subpoena or otherwise, the attendance of witnesses and the production of records, papers, documents and other materials, take testimony, receive evidence, and administer oaths to the extent that the Commission or any panel or member considers advisable.

(2)(A) Subpoenas issued pursuant to paragraph (1) shall bear the signature of the Co-Chairpersons of the Commission and shall be served by any person or class of persons designated by the Co-Chairpersons for that purpose.

(B) In the case of contumacy or failure to obey a subpoena issued under paragraph (1), the United States district court for the judicial district in which the subpoenaed person resides, is served, or may be found may issue an order requiring such person to appear at any designated place to testify or to produce documentary or other evidence. Any failure to obey the order of the court may be punished by the court as a contempt that court.

(b) INFORMATION FROM FEDERAL AGENCIES- (1) The Commission may secure directly from any department, agency, or entity of the Federal Government any information that the Commission considers necessary to enable the Commission to carry out its responsibilities under this Act.

(2) Upon request of a Co-Chairperson of the Commission, the head of any such department, agency, or entity shall furnish such information expeditiously to the Commission.

(c) POSTAL, PRINTING AND BINDING SERVICES- The Commission may use the United States mails and obtain printing and binding services in the same manner and under the same conditions as other departments and agencies of the Federal Government.

(d) PANELS- (1) The Commission may establish panels composed of less than the full membership of the Commission for the purpose of carrying out the Commission's duties.

(2) The actions of each such panel shall be subject to the review and control of the Commission.

(3) Any findings and determinations made by such a panel shall not be considered the findings and determinations of the Commission unless approved by the Commission.

(e) AUTHORITY OF INDIVIDUALS TO ACT FOR COMMISSION- Any member or agent of the Commission may, if authorized by the Commission, take any action which the Commission is authorized to take under this Act.

#### SEC. 6. PERSONNEL MATTERS.

(a) COMPENSATION OF MEMBERS- (1) Each member of the Commission who is a private United States citizen shall be paid, if requested, at a rate equal to the daily equivalent of the annual rate of basic pay payable for level V of the Executive Schedule under section 5316 of title 5, United States Code, for each day (including travel time) during which the member is engaged in the performance of the duties of the Commission.

(2) All members of the Commission who are officers or employees of the United States shall serve without compensation in addition to that received for their services as officers or employees of the United States.

(b) TRAVEL EXPENSES- Each member of the Commission shall be allowed travel expenses, including per diem in lieu of subsistence, at rates authorized for employees of agencies under subchapter I of chapter 57 of title 5, United States Code, while away from their homes or regular places of business in the performance of services for the Commission.

(c) STAFF- (1) The Co-Chairpersons of the Commission may, without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, appoint a staff director and such additional personnel as may be necessary to enable the Commission to perform its duties. The staff director of the Commission shall be appointed from private life, and such appointment shall be subject to the approval of the Commission as a whole.

(2) The Co-Chairpersons of the Commission may fix the pay of the staff director and other personnel without regard to the provisions of chapter 51 and subchapter III of chapter 53 of title 5, United States Code, relating to classification of positions and General Schedule pay rates, except that the rate of pay fixed under this paragraph for the staff director may not exceed the rate payable for level V of the Executive Schedule under section 5316 of such title and the rate of pay for other personnel may not exceed the maximum rate payable for grade GS-15 of the General Schedule.

(d) DETAIL OF GOVERNMENT EMPLOYEES- Upon request of the Co-Chairpersons of the Commission, the head of any Federal department or agency may detail, on a nonreimbursable basis, any personnel of that department or agency to the Commission to assist it in carrying out its administrative and clerical functions.

(e) PROCUREMENT OF TEMPORARY AND INTERMITTENT SERVICES- The Co-Chairpersons of the Commission may procure temporary and intermittent services under section 3109(b) of title 5, United States Code, at rates for individuals which do not exceed the daily equivalent of the annual rate of basic pay payable for level V of the Executive Schedule under section 5316 of such title.

(f) ADMINISTRATIVE AND SUPPORT SERVICES- The Secretary of Defense and the Secretary of State shall furnish the Commission, on a non-reimbursable basis, any administrative and support services requested by the Commission consistent with this Act.

#### SEC. 7. PAYMENT OF COMMISSION EXPENSES.

The compensation, travel expenses, per diem allowances of members and employees of the Commission, and other expenses of the Commission shall be paid equally out of funds available to the Secretary of Defense and the Secretary of State for the payment of compensation, travel allowances, and per diem allowances, respectively, of employees of the Department of Defense and the Department of State, as the case may be.

#### SEC. 8. TERMINATION OF THE COMMISSION.

The Commission shall terminate one month after the date of the submission of the report required by section 4(c).

**Appendix D**  
**SENATOR WARNER'S STATEMENT ON**  
**THE CTBT COMMISSION**

**Appendix D**  
**SENATOR WARNER'S STATEMENT ON**  
**THE CTBT COMMISSION**

FOR IMMEDIATE RELEASE:  
October 15, 1999  
Carter\_Cornick@warner.senate.gov

CONTACT: Carter Cornick  
PHONE: 202-224-6290

Warner Statement on CTBT Commission

On Wednesday evening, the Senate cast a historic vote on the Comprehensive Test Ban Treaty.

In the aftermath of this vote, I am reminded of the old saying, "The past is prologue."

At some point we have to lift this issue from the cauldron of politics.

Now, is it not time to build bridges and find common ground on the issue of a possible treaty covering nuclear testing? Let the issues be worked on, for a while, by people of the caliber, of the experience, of those who wrote to the Senate, who testified, and called or sent statements during the Senate's debate. Their wisdom can then be returned to our next President and the 107th Congress.

That is why, today, I propose the creation of a bipartisan, blue ribbon commission of experts, representing differing viewpoints on the basic issues, to study this issue and make recommendations — including possible changes to the Treaty. Colleagues, I ask for your "advice and consent" as I pursue this goal of a commission.

During the course of the debate in the Senate, it was clear that a number of Members could have supported some type of a test ban treaty, but were troubled by several key provisions in the Comprehensive Test Ban Treaty that was before us.

Of particular concern was the zero-yield threshold. Legitimate concerns were raised about our ability to monitor violations down to the zero-yield level, and with our need to conduct, at some point in the future, very low



yield nuclear explosions to verify the safety of our stockpile, or to ensure the validity of the stockpile stewardship program. Perhaps it would have been better to agree to a Treaty which allowed very low yield testing—as all past Presidents, beginning with President Eisenhower, have proposed.

Another grave concern was the fact that this Treaty bans nuclear testing in perpetuity. When we are dealing with the safety and credibility of the U.S. nuclear arsenal, we should exercise the greatest degree of caution. Would it not have been better to have a treaty which required, specifically in its text, periodic reviews, at fixed intervals, as did the Nuclear Non-Proliferation Treaty (NPT)? At the time the Senate considered that Treaty, the NPT provided for automatic reviews every five years.

The Stockpile Stewardship Program was another issue of concern. In my view, it is just not far enough along, as confirmed by qualified experts, for the United States to stake the future of its nuclear arsenal on this alternative to actual testing. More needs to be done on that issue. For example, there is currently underway a panel, pursuant to a provision in the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999, to study and report on the reliability, safety and security of the U.S. nuclear stockpile. Perhaps some of the fine work of this commission, which is comprised of experts such as former Secretary of Defense James Schlesinger and Dr. Johnny Foster, could be incorporated into the work of a test ban commission.

These are but examples of a number of issues related to this Treaty where there are honest differences of opinion, and over which bridges must be built to reach common ground. These issues could benefit from examination now by a group outside of the political arena — a group of experts.

Recent history is replete with examples of commissions, composed of a bipartisan group of experts, who have successfully advised the Congress, the President.

For example, in 1994, when I was Vice Chairman of the Intelligence Committee and the CIA was under attack, I included legislation in the FY95 Intelligence Authorization Act establishing a Commission to study the roles and capabilities of the Intelligence Community. The commission was formed by the President and the Congressional leadership. It was chaired by former secretaries of defense Les Aspin and Harold Brown and former Senator Warren Rudman. They met the challenge; their advice was accepted.

Let's join together; get it done.

I ask unanimous consent that a number of items be included in the Record at this point.

**Appendix E**  
**REMARKS BY SENATOR WARNER CONCURRENT WITH THE**  
**INTRODUCTION OF S.1812**

**Appendix E**  
**REMARKS BY SENATOR WARNER CONCURRENT WITH THE**  
**INTRODUCTION OF S.1812**

**PRESIDENTIAL AND SENATORIAL COMMISSION ON NUCLEAR TESTING  
TREATY (Senate -October 27, 1999)<sup>1</sup>**

Mr. WARNER. Mr. President, I address the Senate today with regard to a bill that I am introducing which provides for the establishment of a commission to be known as the Presidential and Senatorial Commission on a Nuclear Testing Treaty.

On October 15, shortly after the historic debate in the Senate and the vote taken on the Comprehensive Test Ban Treaty, I addressed the Senate, suggesting that the President and the Senate explore options by which a commission could be appointed for the purpose of assessing issues relating to testing of nuclear weapons, and the possibility of crafting a treaty that would meet the security interests of our Nation, while enabling America to once again resume the lead in arms control.

Following the historic debate and vote, I voted against that treaty, and I would vote again tomorrow against that treaty, and the day after, and the day after that. I say that not in any defiant way, but simply, after three hearings of the Armed Services Committee and one of the Foreign Relations Committee, after very careful analysis, after hours of discussion with my colleagues, after participating in the debate, it was clear to me that the record did not exist to gain my support nor, indeed, the support of two-thirds majority of the Senate. It is my view that the Senate and the President will join together to provide bipartisan leadership to determine, in a collaborative way, how to dispel much of the confusion in the world about why this Senate failed to ratify the treaty, to explain what the options are now, and to show that we are analyzing all of the other possibilities relating to a nuclear testing treaty. This, hopefully, will dispel such confusion. Much of that confusion is based on misconceptions and wrong information. But we can overcome that.

We must explain that this Government has coequal branches—the executive, headed by the President; and the legislative, represented by the Congress—and how our Constitution entrusts to this body, the Senate, sole authority to give advice and consent. This body exercised that obligation, I think, in a fair and objective manner. But we are where we are.

My bill is somewhat unique, Mr. President. I call for a commission with a total of 12 members—6 to be appointed by the majority leader of the Senate; 6 to be appointed by

---

<sup>1</sup> Senator Warner, *Congressional Record—Senate*, October 27, 1999, S13248-S13249.

the distinguished Democratic leader of the Senate, with coequal responsibility between two members to be designated as cochairmen. I did that purposely to emphasize the need for bipartisanship. We, the Senate, will not ratify the treaty unless there are 67 votes in the affirmative. This last vote was 19 votes short—votes cast by individuals of this body of clear conscience. That significant margin of 19 votes, in my judgment, can only be overcome through a bipartisan effort to devise a nuclear testing treaty seen clearly as in our national interests.

The cochairmen will be appointed—first, one by the distinguished majority leader of the Senate, and the second by the President, in consultation, of course, with the distinguished minority leader. That brings the President well into the equation. He will undoubtedly be in consultation with the distinguished minority leader throughout the series of appointments by the minority leader.

This commission can have no more than two Members of the Senate appointed by the majority leader, and no more than two Members of the Senate, if he so desires, appointed by the minority leader. Therefore, up to four Senators could participate. But the balance of the 12—8 members—will be drawn from individuals who have spent perhaps as much as a lifetime examining the complexity of issues surrounding nuclear weapons, the complexity of the issues surrounding all types of treaties, agreements, and understandings relating to nonproliferation.

We saw them come forward in this debate—individuals such as former Secretaries of Defense, former Secretaries of State, men and women of honest, good intention, with honest differences of opinion, and those differences have to be bridged. By including eight individuals not in the Senate along with four Senators—if it is the will of the—we can lift this issue out of the cauldron of politics. We can show the world that we are making a conscientious effort to act in a bipartisan manner. The experts the majority leader and the ones the minority leader, in consultation with the President, would pick will be known to the world—former Secretaries of Defense of this Nation, former Secretaries of State, former National Laboratory Directors, individuals whose collective experience in this would add up to hundreds of years. In that way, I believe we will bring credibility to this process and will result in this commission being able to render valuable advice and recommendations to the Senate and the President at the end of their work.

Several years ago, I was privileged to be the Ranking Member of the Senate Select Committee on Intelligence. There was a great deal of concern in the Senate toward the Central Intelligence Agency and how it was operating at that time. As a matter of fact, some of our most distinguished Members—one indeed I remember clearly—called for the abolishment of the CIA. This individual was extremely disturbed with the manner in which they were conducting business.

I took it upon myself at that time to introduce in the Senate legislation calling for the establishment of a commission to make an overall study of our intelligence and to make recommendations to the President and the Congress. Congress adopted the legislation I introduced and it was enacted into law.

The first chairman of that commission was Les Aspin, former Secretary of Defense, who, unfortunately, had an untimely death. He was succeeded by Harold Brown, former Secretary of Defense and former Secretary of the Air Force, who I knew well. I served with him. Our former colleague, Senator Rudman, was also closely involved. I was privileged to be on that commission. It did its work. It came up with recommendations. The intelligence community accepted those recommendations. The CIA survived and today flourishes.

I have given the outline of the commission I am proposing today. Let me briefly refer to the basic charge given the commission and the work they should perform.

Duties of the commission: It shall be the duty of the commission, (1) to determine under what circumstances the nuclear testing treaty would be in the national security interests of our Nation; (2) to determine how a nuclear testing treaty would relate to the security interests of other nations. I was motivated to do this because of the misunderstanding about the important and decisive action taken by this body. (3) To determine provisions essential to a nuclear testing treaty such that that treaty would be in the national security interests of the United States; (4) to determine whether a nuclear testing treaty would achieve the nonproliferation and arms control objectives of our Nation.

The bill includes a number of other recitations and other important provisions. We deal with the question of verification. We deal with the question of the science-based stockpile stewardship program, now being monitored and more fully developed by the Department of Energy.

All of this is carefully covered in this legislation I make to this body tonight.

This is one Senator who believed he had an obligation to confer with his colleagues about this important matter. I believe it is important that this legislation be laid down as a starting point. It may well be that other colleagues have better ideas. I take absolutely no pride of authorship in this effort. Perhaps others can contribute ideas as to how this legislative proposal might be amended.

Eventually, collectively, I hope we can work with our leadership in establishing some type of commission so the consideration of a nuclear testing treaty can go forward and people around the globe will have a better understanding of our efforts to achieve a more secure world.

I went back to do a little research which proved quite interesting.

We have heard so many times in this Chamber that politics should stop at the water's edge. I was reminded of this as I was privileged, along with many others in this Chamber, to attend the presentation to the former President of the United States, Gerald R. Ford, and his lovely wife, Mrs. Betty Ford, the Congressional Gold Medal.

I took down some notes from President Ford's wonderful speech. I had the privilege of serving under President Ford as Secretary of the Navy and, indeed, Chairman of the Bicentennial. I have great respect for him.

He talked about Senator Vandenberg and how Senator Vandenberg was an absolute, well-known conservative. Yet it was Senator Vandenberg's leadership that got the Marshall Program through the Senate of the United States. The Marshall Program was a landmark piece of legislation initiated by President Truman. Indeed, in some of the accounts of history, some people said it should be called the Truman Plan. But Truman said, "Oh, no, don't name it after me because the Congress won't accept it; name it after George Marshall"—showing the marvelous character of the wonderful President.

President Ford also talked about Everett Dirksen. He said:

The executive branch and the legislative branch worked with him arm in arm on relationships that were important between this country and the rest of the world.

Those are Ford's words.

Bipartisanship helped get the Marshall Plan through and enabled this country to show strength in the face of the cold war period.

That is history, ladies and gentleman.

I don't suggest in any way that I am making history here tonight. But I think it is very important that other Senators take time to look at this and contribute their own ideas. It will require a significant measure of bipartisanship to achieve the objectives of the commission I am proposing. Let's see what we can do to work with our leadership and go forward.

The events of history are interesting. Senator Vandenberg, chairman of the Foreign Relations Committee, in 1948, thought Tom Dewey was going to win the Presidency. He wrote into the Republican platform the following phrase. I quote him:

We shall invite the minority party to join us under the next Republican administration in stopping partisan politics at the water's edge.

As it turned out, Truman won that historic election. And what did Vandenberg do but go on and work with President Truman in the spirit of that statement that he put into the Republican platform, and the first landmark that the two achieved was the Marshall Plan.

Mr. President, I yield the floor.

**Appendix F**  
**GLOSSARY**

## **Appendix F**

### **GLOSSARY**

ACP	Annual Certification Process
CTBT	Comprehensive Test-Ban Treaty
ICBM	Intercontinental Ballistic Missile
KT	Kiloton
MIRV	Multiple Independent Reentry Vehicles
NIF	National Ignition Facility
Panel	Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile
SSP	Stockpile Stewardship Program





**Appendix G**  
**BIBLIOGRAPHY**

## Appendix G

### BIBLIOGRAPHY

- 1998 Annual Report*, Lawrence Livermore National Laboratory. <[www.llnl.gov/director/annual-report98](http://www.llnl.gov/director/annual-report98)>.
- Albright, Secretary of State Madeleine K. Remarks and Q&A Before the Chicago Council on Foreign Relations, Chicago, Illinois, November 10, 1999. <[secretary.state.gov/www/statements/](http://secretary.state.gov/www/statements/)>
- Clinton, President William J. Letter of Transmittal to the Senate of the United States, The White House, September 22, 1997. U.S. Department of State, Comprehensive Test-Ban Treaty. <[www.state.gov/www/global/arms/ctbtpage/ntbpage.html](http://www.state.gov/www/global/arms/ctbtpage/ntbpage.html)>
- . Press Conference by the President, The White House, Washington, DC. October 14, 1999. <[www.whitehouse.gov/WH/New/html/19991014.html](http://www.whitehouse.gov/WH/New/html/19991014.html)>
- Compact Oxford English Dictionary*. Oxford. Clarendon Press. 2<sup>nd</sup> edition. 1991.
- Conference on Disarmament, Geneva, Switzerland. *Conference on Disarmament Overview, 1999*. <[www.unog.ch/frames/disarm/disconf.htm](http://www.unog.ch/frames/disarm/disconf.htm)>
- Conference on Disarmament, Geneva, Switzerland, *Rules of Procedure of the Conference on Disarmament*, CD/8/Rev. 8, 17 August 1999. <[www.unog.ch/frames/disarm/cdproced.htm](http://www.unog.ch/frames/disarm/cdproced.htm)>
- Conference on Disarmament, Geneva, Switzerland. *Report on the Conference on Disarmament to the General Assembly of the United Nations*, CD/1436, 12 September 1996. <[www.unog.ch/frames/disarm/disdoc/htm](http://www.unog.ch/frames/disarm/disdoc/htm)>.
- Congressional Record - Senate*, October 8, 12, and 13, 1999. <[thomas.loc.gov](http://thomas.loc.gov)>
- Gertz, Bill. "Albright Says U.S. Bound by CTBT." *The Washington Times*, November 2, 1999, p. 1.
- . "Lott Hits Clinton's Stance on Nuke Pact, Says He's Risking Ties with Senate." *The Washington Times*, November 3, 1999, p. 1.
- Helms, Senator Jesse. Letter to Senator Byron L. Dorgan. July 26, 1999. <[www.clw.org/coalition/ctbtindex.htm](http://www.clw.org/coalition/ctbtindex.htm)>

Letter from all 45 Democratic Senators to Senator Jesse Helms, Chair, Foreign Relations Committee, Calling for Hearings on the Comprehensive Test Ban Treaty, July 20, 1999. <[www.clw.org/coalition/ctbtindex.htm](http://www.clw.org/coalition/ctbtindex.htm)>.

Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile. *FY 1999 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile*. November 1999, <[www.dp.doe.gov/dp\\_web/public\\_f.htm](http://www.dp.doe.gov/dp_web/public_f.htm)>.

Richardson, Secretary of Energy Bill. "Statement by Secretary Richardson on Stockpile Stewardship." *U.S. Department of Energy News*, October 14, 1999. <[www.doe.gov/news/newsnrb.htm](http://www.doe.gov/news/newsnrb.htm)>

"Secretary of Energy Advisory Board will Review National Ignition Facility, Richardson Appoints Independent Panel of Experts." *U.S. Department of Energy News*. November 10, 1999. <[www.doe.gov/news/newsnrb.htm](http://www.doe.gov/news/newsnrb.htm)>

Strom Thurmond National Defense Authorization Act of 1999, also 112 STAT. 2258, Public Law 105-261—October 17, 1998.

United Nations, Department of Disarmament Affairs. Comprehensive Nuclear-Test-Ban Treaty (CTBT) Brief Background, no date. <[www.un.org/Depts/dda/WMD/WMD.htm](http://www.un.org/Depts/dda/WMD/WMD.htm)>

United Nations General Assembly, Resolution A/RES/50/245, September 17, 1996, Fiftieth Session, Agenda Item 65, submitted by Australia. <[gopher.un.org:70/00/ga/recs/50/res50-en.245](http://gopher.un.org:70/00/ga/recs/50/res50-en.245)>.

Uranium Institute, London. Treaty on the Non-Proliferation of Nuclear Weapons (NPT), 1997. <[www.uilondon.org/uilondon/sgnpt.htm](http://www.uilondon.org/uilondon/sgnpt.htm)>

U.S. Department of Energy, Office of Defense Programs, Stockpile Stewardship Program. *30-Day Review*. November 23, 1999. <[www.dp.doe.gov/dp\\_web/public\\_f.htm](http://www.dp.doe.gov/dp_web/public_f.htm)>.

U.S. Department of Energy, Office of Defense Programs. *Fiscal Year 2000 Stockpile Stewardship Plan Executive Overview*. <[www.dp.doe.gov/dp\\_web/public\\_f.htm](http://www.dp.doe.gov/dp_web/public_f.htm)>

U.S. Department of State. Comprehensive Test-Ban Treaty. <[www.state.gov/www/global/arms/ctbtpage/ntbpage.html](http://www.state.gov/www/global/arms/ctbtpage/ntbpage.html)>

Vienna Convention on the Law of Treaties, signed at Vienna, May 23, 1999; entered into force, January 27, 1980. <[gopher.law.cornell.edu:70/00/foreign/fletcher/treaties.txt](http://gopher.law.cornell.edu:70/00/foreign/fletcher/treaties.txt)>

Warner, Senator John. Statement on the CTBT Commission, October 15, 1999. <[www.senate.gov/~warner/releases.htm](http://www.senate.gov/~warner/releases.htm)>

**REPORT DOCUMENTATION PAGE***Form Approved*  
*OMB No. 0704-0188*

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE March 2000		3. REPORT TYPE AND DATES COVERED Final	
4. TITLE AND SUBTITLE  <i>Nuclear Stockpile Certification and Stewardship as Addressed in the Senate's October 1999 CTBT Deliberations</i>				5. FUNDING NUMBERS  DASW01 98 C 0067 AI-6-1742	
6. AUTHOR(S) Rob Mahoney					
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  Institute for Defense Analyses 1801 N. Beauregard Street Alexandria, VA 22311				8. PERFORMING ORGANIZATION REPORT NUMBER  IDA Document D-2426	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)  Office of the Director, Defense Research and Engineering Pentagon Washington, DC 20301				10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES					
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited.				12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) This report summarizes Senate consideration of the Comprehensive Test Ban Treaty in October 1999. It has been prepared as part of the support that the Institute for Defense Analyses is providing the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile established by Congress. Key topics during the Senate's consideration of the CTBT were nuclear stockpile certification and the stockpile stewardship program.					
14. SUBJECT TERMS Comprehensive Test Ban Treaty, CTBT, nuclear testing, nuclear test limitations, nuclear arms control, stockpile stewardship program, verification, nuclear certification, annual certification process, Foster panel, Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile, arms control, treaties				15. NUMBER OF PAGES  108	
				16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT  UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE  UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT  UNCLASSIFIED	20. LIMITATION OF ABSTRACT  UL		